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The Resources Agency
Department of Water Resources

BULLETIN No. 179-69

WATERMASTER SERVICE
IN THE
WEST COAST BASIN
LOS ANGELES COUNTY

FOR PERIOD
OCTOBER 1, 1968 THROUGH SEPTEMBER 30, 1969

DECEMBER 1969

NORMAN B. LIVERMORE, JR.
Secretary for Resources
The Resources Agency

RONALD REAGAN
Governor
State of California

WILLIAM R. GIANELLI
Director
Department of Water Resources



FOREWORD

The West Coast Basin has been operating under a well-defined management plan for several years. One phase of the management plan limits ground water extractions from the basin. This phase is monitored by a Court-appointed Watermaster (California Department of Water Resources) that reports significant ground water activity to the Court and other interested parties.

The Watermaster has prepared this annual report for the parties to the West Coast Basin Judgment and the Superior Court of Los Angeles County to present a comprehensive review of the water conditions in the West Coast Basin during the 1968-69 water year. Authorization for this report is contained in subparagraph 6, paragraph IX of the Judgment rendered by the Superior Court of Los Angeles County in the action: "California Water Service Company, et al., vs. City of Compton, et al., No. 506806".

This report contains information on ground water extractions, use of imported water, recharge operations, the administration of the Exchange Pool, and a financial report on Watermaster Service during the 1968-69 water year.



James J. Doody
District Engineer
Southern District
and Watermaster
Reg. C.E. No. 6500

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State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES

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Norman B. Livermore, Jr., Secretary for Resources
William R. Gianelli, Director, Department of Water Resources
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SOUTHERN DISTRICT

James J. Doody District Engineer and Watermaster
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Watermaster service in this area was conducted
and report prepared under the direction

of

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by

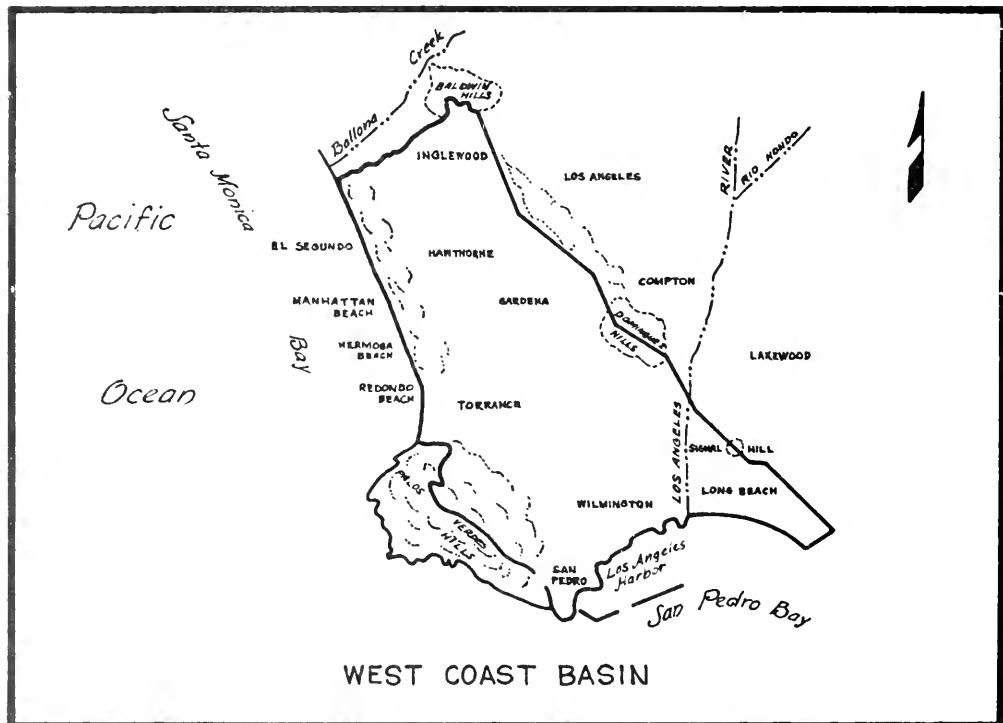
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ABSTRACT

A reliable supply of good quality fresh water is a valuable asset to any community. / The West Coast Basin is a relatively small, but extremely important, ground water basin underlying the southwestern part of the Los Angeles Coastal Plain. Watermaster Service, provided by the California Department of Water Resources, helps to protect and guarantee continued use of ground water by the residents of the area. / The Watermaster has prepared this annual report for the Superior Court and the parties to the Judgment. This report contains information on ground water extractions, use of imported water, recharge operation, sea-water barrier operations, and the administration of the West Coast Basin Judgment. It also serves as a financial report on the cost of Watermaster Service during the 1968-69 water year.



CHAPTER I. THE WEST COAST BASIN

The West Coast Basin is a relatively small ground water basin underlying the southwestern part of the Los Angeles Coastal Plain. The sketch on the facing page shows us that the basin is bounded on the south and west by the Pacific Ocean, on the north by the Ballona Escarpment, and the east by the Newport-Inglewood Uplift. For further details, see Plate 1 on page 2.

Most of the 160 square mile basin supports an urban-suburban culture. There are 19 incorporated cities claiming a share of the basin's surface area (in this report, the term West Coast Basin is used for both the ground water basin and the overlying area). Fortunately, a substantial portion of the water needed by the cities can be pumped directly from the basin below.

Obviously, ground water is important to the people who live and work in the West Coast Basin. Some twenty years ago, when declining water levels triggered sea-water intrusion which threatened the ground water supply, swift legal action halted the overdraft and prevented serious damage to the basin. Today, ground water use in the West Coast Basin is monitored by a court-appointed Watermaster. The Watermaster's prime job is to control ground water use and report all significant water-related events that occur in the West Coast Basin to the Court and parties.

Watermaster Service

Watermaster Service is administered by the California Department of Water Resources in accordance with Part 4, Division 2, of the California Water Code. Watermaster Service Areas are created by the Department either at the request of water users or by order of the Superior Court. The first Watermaster Service Area was formed on September 1929. Currently there are 19 such areas controlling the surface water diversions in Northern California and 4 in Southern California controlling ground water use.

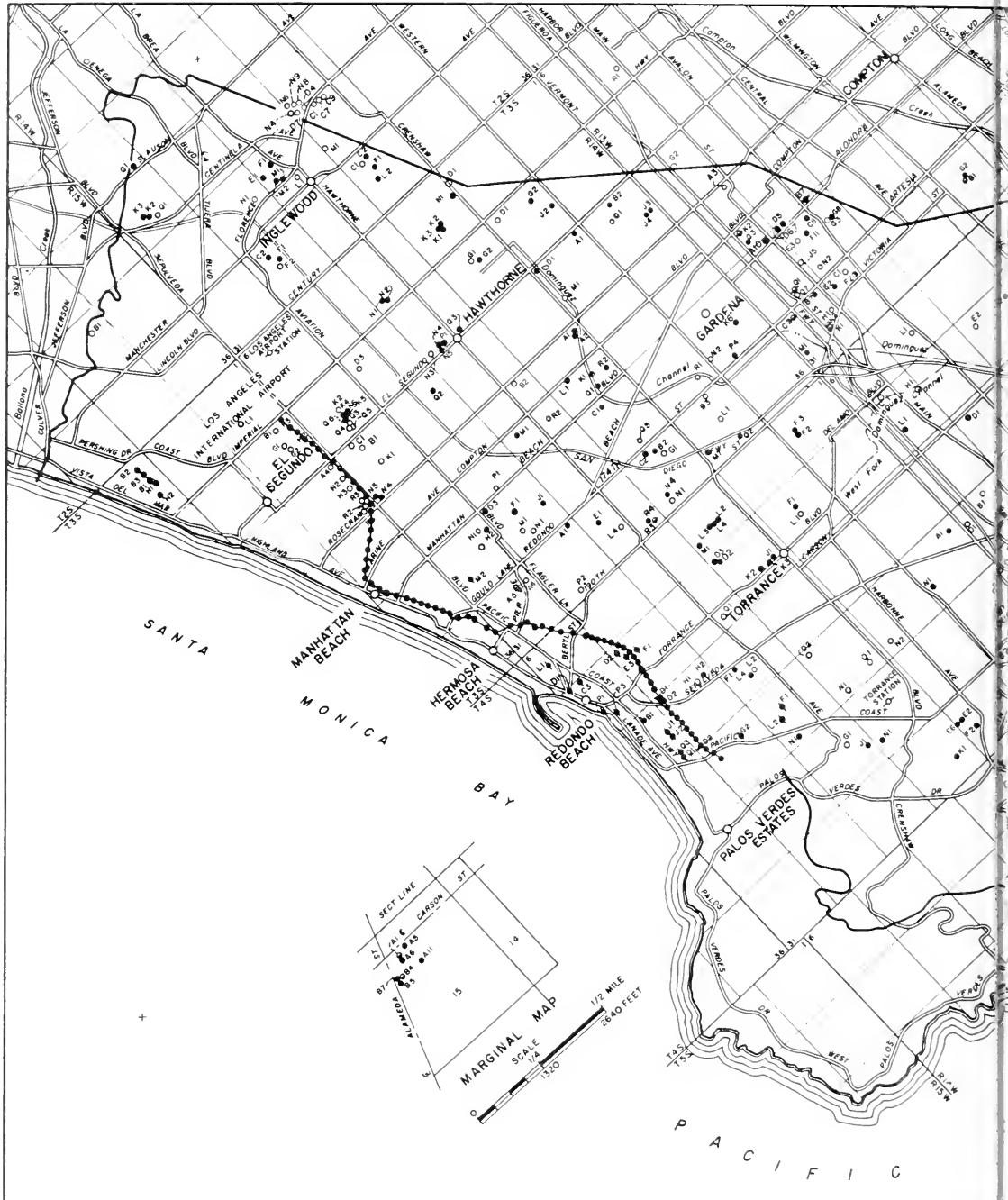
The primary purpose of the program is to reduce friction and increase rapport among water users of a water supply that is in critical demand. The cost of the program is shared equally by the State and those receiving the service.

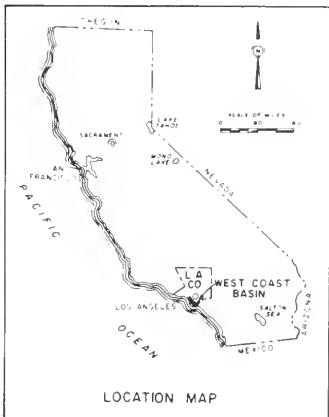
Scope of Report

This is the Watermaster's annual report to the Superior Court of Los Angeles County -- and to you as a water user or interested observer of water conditions in the West Coast Basin. The purpose of this report is to describe water supply conditions in the West Coast Basin during the water year 1968-69 (October 1, 1968 through September 30, 1969).

Detailed comments have been prepared on the following topics: the history of water resources development, natural and artificial ground water replenishment, use of imported and exported water, ground water extractions, sea-water intrusion barriers, and fluctuations of the ground water table.

Extensive coverage -- in each case a complete chapter -- has been devoted to the Watermaster's administration of the Judgment and the cost of Watermaster Service during the 1968-69 water year.





LEGEND

- BASIN BOUNDARY
- ACTIVE WELLS OF PARTIES
- INACTIVE WELLS OF PARTIES
- ◆ ACTIVE WELLS OF NONPARTIES
- INACTIVE WELLS ON WHICH CONTINUOUS RECORDERS MEASURING WATER LEVEL FLUCTUATIONS ARE MAINTAINED BY PARTIES
- INACTIVE WELLS ON WHICH CONTINUOUS RECORDERS MEASURING WATER LEVEL FLUCTUATIONS ARE MAINTAINED BY D.W.R.
- ◆ LOS ANGELES COUNTY FLOOD CONTROL DISTRICT OBSERVATION WELLS
- ◆◆ LINE OF INJECTION WELLS
- ◆ PRECIPITATION STATION

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT

WEST COAST BASIN WATERMASTER SERVICE

LOCATION OF WELLS
AND
PRECIPITATION STATIONS

SCALE OF MILES
1 2
1969

History of Water Resources Development

One hundred years ago, the Los Angeles Coastal Plain was poised on the threshold of a development boom. The key to the future of the West Coast Basin was water.

The definite absence of adequate surface supplies in the West Coast Basin forced the early development of ground water sources. As early as 1870 Inglewood and Long Beach had tapped the artesian wells and springs east of the Newport-Inglewood Uplift for use in the West Coast Basin. When the artesian wells ceased to flow, water users were forced to drill small wells for reliable water supplies. By 1904, about 100 wells were producing 10,000 acre-feet of water annually from the West Coast Basin.

Ground water development spurted dramatically ahead in 1909 with the advent of the deep well turbine pump. Tremendous adaptability and superior operating characteristics of the new pump placed efficient water wells within economic reach of everyone. Reliable water supplies attracted industry and agriculture. Each new business required water. Eventually, the demand for ground water exceeded the natural replenishment of the West Coast Basin.

The resulting overdraft was clearly indicated by dropping ground water levels and expanding areas of sea-water intrusion. Indeed, water levels throughout the basin dropped below sea level during the 1920's. Water wells along Santa Monica Bay were abandoned before 1920 because the water was too salty for use. By 1932, the entire coastal reach of the West Coast Basin was invaded by sea water. The ground water problem was serious and deteriorating each year.

Ground water conditions became so bad in 1945 that the California Water Service Company, the City of Torrance, and the Palos Verdes Water Company filed suit in Superior Court of Los Angeles County. The Plaintiff's objectives: quiet title to the ground water rights of each pumper, and establish control over ground water extractions from the basin. Other organizations moved immediately to support the litigation. The West Basin Water Association was formed in 1946. It promptly sponsored a team of legal advisors to represent the major water producers named in the suit.

A plan to manage the West Coast Basin's water resources began to materialize. The plan would:

1. Provide a supplemental water supply to major producers.
2. Limit ground water extractions from the West Coast Basin.
3. Create an exchange water pool to provide pumping rights for water users without access to supplemental water.

Phase 1 was realized in 1947 when the West Basin Municipal Water District was formed to distribute water from the Colorado River. The District was annexed to the Metropolitan Water District of Southern California in 1948, and Colorado River water was soon flowing into the West Coast Basin.

Phases 2 and 3 were initiated when the Court held its preliminary hearings in 1946. These hearings defined the ground water problem and outlined areas where additional information and knowledge were required. Then the Court asked the California Division of Water Resources (now Department of Water Resources) to define the boundaries and determine the geologic and hydrologic characteristics of the West Coast Basin. The major water producers also retained an "Engineering Advisory Committee" to aid the Division during the investigation.

As more and more information became available, the actual magnitude of the problem grew painfully obvious. In 1949, an amended complaint added 340 parties to the suit and alleged that each party's pumping right was adverse to every other party's right.

For six years, the Division of Water Resources analyzed the physical properties of the West Coast Basin. A "Report of Referee" was filed with the Court on September 15, 1952.

Several years had passed before water users became sufficiently alarmed to take action. The ground water condition had become critical in the intervening years and direct action was needed. As a consequence, the major pumpers drafted an Interim Agreement to reduce ground water extractions until a final Judgment was approved. The Court not only approved the Interim Agreement but made it an ex parte order and appointed the Division of Water Resources Watermaster to administer the Agreement.

Litigation toward a final Judgment resumed immediately. However, more up-to-date information was needed to continue litigation, so the Court again requested and the Department of Water Resources conducted an additional investigation.

A "Final Report of Referee", including data on ground water conditions between 1950 and 1956, was filed on June 8, 1961. The Report provided the information needed to draft the final Judgment. On August 8, 1961, after 16 years of litigation, the Court rescinded the Interim Agreement and signed the West Coast Basin Judgment. The new Judgment retained the Department of Water Resources as Watermaster.

During the last few years of litigation, several persons began to extract water from the basin to meet their water needs. These new pumpers were not named in the original West Coast Basin suit and were exempt from the orders of the Judgment. Therefore, a second West Coast Basin water right suit was filed on October 31, 1956 to bring each new pumper under the Judgment.

Litigation in "Case No. 668,965, Dominguez Water Corporation, et al., vs. American Plant Growers, Incorporated, et al." terminated on March 24, 1966. The Judgment obtained Superior Court Jurisdiction over several producers that were not named in the original suit.

The second suit (often called the American Plant Growers Case) originally named 60 parties. Later, 57 more parties were added to the list. Seventy-six parties were actually served. Ten filed disclaimers; eight answered and claimed a pumping right; twenty-six parties defaulted claiming no right; and several parties were dismissed from the action.

The California Department of Water Resources was named Watermaster and the second suit parties were merged with the parties named in the original suit for administrative purposes. Since the conclusion of the second suit, there has been no significant litigation in the West Coast Basin.

Activities of the Watermaster

The Watermaster has now administered the West Coast Basin Judgment for eight years. Always, the focal point of activity has been the annual report to the Superior Court and the parties. The annual report is replete with information gathered throughout the water year; so much information, in fact, that it has become necessary to use electronic data processing machines extensively. It is felt that the speed and accuracy of machines easily offset the small expense charged for machine rental.

Once a month, every ground water pumper reports his ground water extractions on preprinted forms prepared and supplied by the Watermaster. This makes possible the updating of his water right account (Watermaster Water Production Summary) by electronic machines which compute the amount pumped during the previous month, the total amount pumped thus far during the current water year, and the amount that can legally be pumped during the remainder of the water year. A copy of the updated account is then mailed to the pumper so that he may more effectively manage his ground water right and use.

Occasionally, the Summary will indicate a pump and/or water meter malfunction. If electric meter readings are reported along with water meter readings, electric power consumption can be correlated with water production. Erratic or rapidly increasing electric power consumption vs. water production, for instance, may suggest an inefficient pump, system losses, or an inaccurate water meter.

The Watermaster field staff calibrates the water meter on every active water well at least once a year. Accurate measurement of ground water extractions is absolutely necessary to the success of the Basin's management plan. Every available means, including system efficiency tests, are used to confirm water meter test results. Inaccurate meters (outside the $\pm 5\%$ of accuracy range) must be repaired within thirty days. Follow-up tests and initial test on new wells are scheduled whenever necessary. One copy of each test is furnished to the well owner and another copy is retained by the Watermaster for comparison with future tests.

Twice during the water year, once in the fall and once in the spring, the depth to the static ground water level was measured in about 350 water wells scattered about the Basin. The measurements were used to prepare "fall" and "spring" contour maps of the ground water surface and a "fall to fall" map showing areas of equal elevation change over a one-year period.

These are the major activities of the West Coast Basin Watermaster. Of course, there are many others -- but most do not require enough time to be considered major activities. Therefore, instead of trying to list them, the report will continue with the results of the various activities.

Summary of Operating Conditions

Water supply and demand conditions have not changed appreciably for several years. Ground water extractions have averaged about 60,000 acre-feet annually. Imports continue to increase each year, as water requirements grow and additional supplemental sources are developed. Table 1 compares statistics for the last two water years and confirms that operating conditions are virtually unchanged from the prior water year.

TABLE 1
WATER YEAR SUMMARIES

Item	Water Year 1967-68	Water Year 1968-69
Parties	88	82
Active pumpers	51	49
Active nonparties	5	4
Adjudicated Right, in acre-feet	64,468.95	64,468.25
Watermaster expenses	\$ 39,619.52	\$ 26,970.51
Watermaster expenses per acre-foot pumped	\$.64	\$.44
Rainfall, in inches	11.56	20.15
Injection at barrier project	39,583 acre-feet	36,416 acre-feet
Extractions	61,554 acre-feet	61,638 acre-feet
Imports	243,184 acre-feet	240,276 acre-feet
Exports	<u>- 11,445</u> acre-feet	<u>- 11,224</u> acre-feet
Total water use	293,293 acre-feet	290,690 acre-feet

Ten parties overextracted a total of 98.98 acre-feet during the 1968-69 water year. Eight of these parties overextracted by less than the 10 percent or 2 acre-feet limited by the Judgment. The two parties in violation purchased sufficient water from the 1969-70 West Coast Basin Exchange Pool to offset its overextraction and to meet its 1969-70 needs. As a result, the Watermaster recommends that no action be brought before the Court against these two parties.

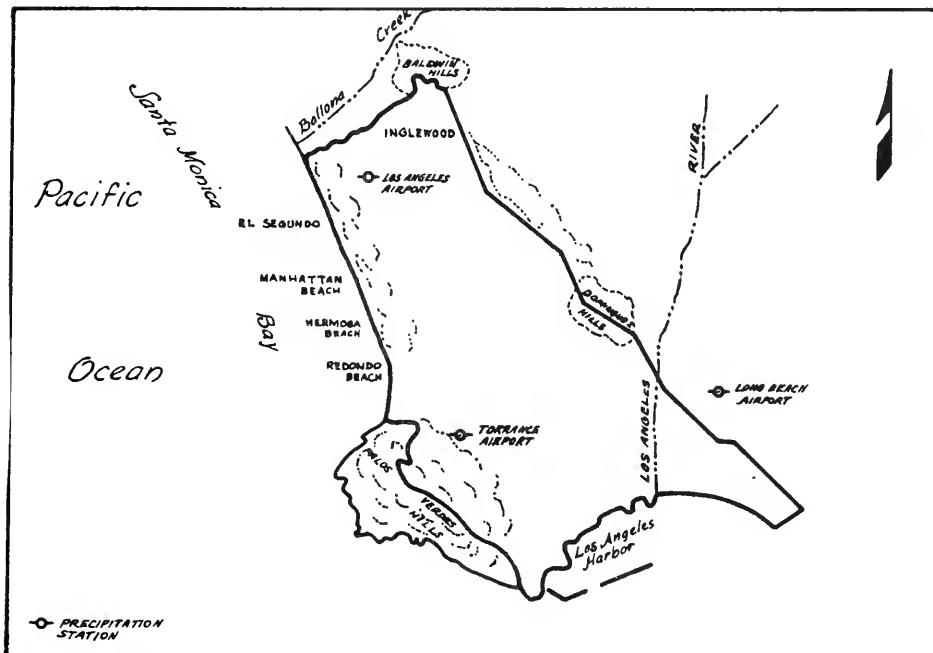


CHAPTER II. WATER SUPPLY CONDITIONS

Water from many sources is required to serve the needs of Southern California's thriving urban economy. Water from the Colorado River, water from the Owens River, runoff from the mountains, ground water, reclaimed waste-water, and desalination plants along the coast contribute to one of the largest, most reliable water supply systems in the world. Soon, water from Northern California will be available. Even so, current forecasts indicate that additional supplies must be found and developed by 1990 to prevent possible shortages. This chapter explores the sources and uses of current supplies and their effect on water conditions in the West Coast Basin.

Precipitation

Southern California enjoys a Mediterranean-type climate characterized by hot, dry summers and sparse precipitation during the winter months. The average rainfall on the West Coast Basin during the 1968-69 water year was 20.15 inches, about 158 percent of the 12.73 long-time average, and 8.59 inches above the previous water year's rainfall. The locations of the precipitation stations used to determine the basin average are shown below and on Plate 1, page 2.



Local precipitation does not influence the ground water supply of the West Coast Basin to any great degree. A layer of impermeable material lies between the surface and the producing aquifers. Almost none of the annual rainfall reaches the zones from where it can be pumped back to the surface.

Ground Water Recharge

Overdraft is a condition where water is removed from a ground water basin faster than it can be replenished by natural processes. Ground water aquifers usually recharge themselves so slowly that a few years of concentrated pumping may upset a balance that took centuries to establish. Basically, this is the situation that existed in the West Coast Basin several years ago.

Natural replenishment of the basin's ground water supply is limited to underflow across the Newport-Inglewood Uplift from the Central Basin. Some of the water that percolates into the forebay areas of Central Basin eventually crosses the Central-West Coast Basin barrier and adds to the underground supply.

Today, attempts are being made to increase the underflow and reestablish nature's balance in several ways. One method is water spreading. Water is flooded on areas where it can percolate into the underground aquifers and supplement the natural recharge supply. Large quantities of water can be returned to the ground by spreading water, but the process is limited by the space available for spreading facilities and the capacity for the ground water basin to accept it.

The Los Angeles County Flood Control District (LACFCD) operates spreading grounds along the Rio Hondo and San Gabriel Rivers in the Montebello Forebay of the Central Basin. Although the spread water is not applied directly to the West Coast Basin, it does substantially increase the natural subsurface flow from Central Basin to West Coast Basin. The entire spreading operation is summarized below in Table 2.

TABLE 2
SPREADING OPERATIONS

Water Source	Quantity in acre-feet	
	1967-68	1968-69
	Water year	Water year
Metropolitan Water District water purchased with Central and West Basin Water Replenishment District funds	28,799	5,251
MWD water purchased with LACFCD Zone 1 funds	66,592	12,529
Local runoff	40,406 ^{1/}	104,222 ^{2/}
Reclaimed water	18,275	13,877
Makeup water from Upper San Gabriel Basin	0	0
TOTALS	154,072	135,879

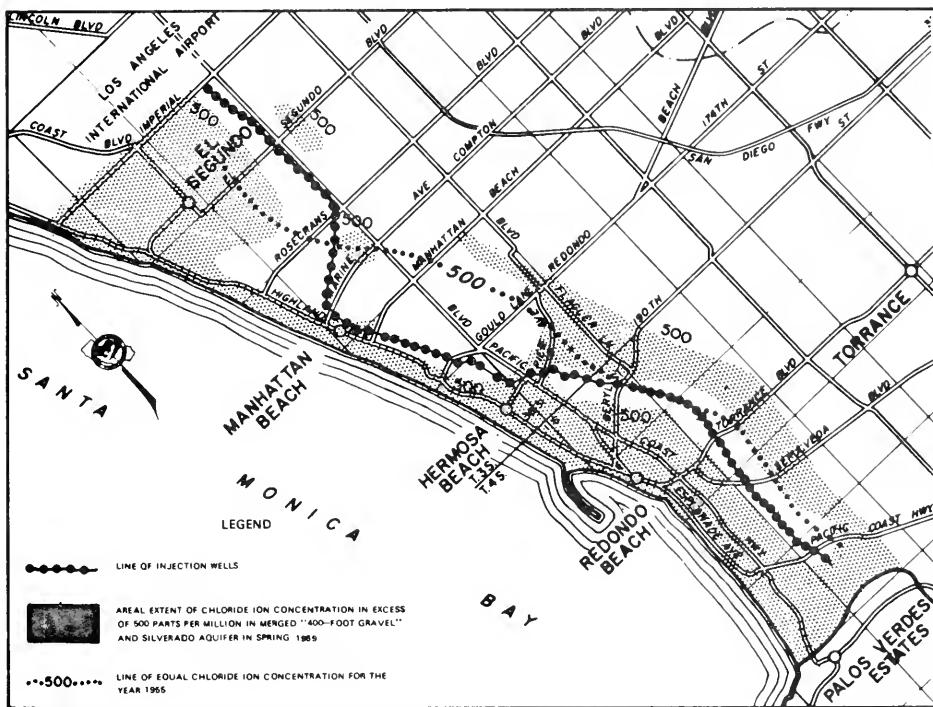
^{1/} Corrected figure

^{2/} Estimated figure

Sea-Water Intrusion Barrier Projects

West Coast Basin Barrier Project

An important milestone in the prevention of sea-water intrusion was reached on November 20, 1968, when the Los Angeles County Flood Control District began to inject filtered Colorado River water into the last completed reach of the barrier project. The Los Angeles County Flood Control District operates and maintains the barrier, which consists of 93 injection wells located parallel to the coastline between Los Angeles International Airport on the north and the Palos Verdes Hills on the south. The scope of the project is shown below.



The extent of sea-water intrusion into the merged phases of the Silverado Aquifer is shown by the 500 parts per million (PPM) contour of chloride ion concentration.

The LACFCD furnished the sea-water intrusion map pictured above and the spreading operation summary shown on Table 2. In addition, the District's staff provided the information shown in Table 3. The LACFCD staff is to be commended for their fine cooperation and assistance.

TABLE 3

BARRIER OPERATIONS

Operation	: West Coast	: Dominguez
	: Basin	: Gap
Quantity injected, in acre-feet	36,416	0
Average injection rate, cubic feet per second	50	0
Number of injection wells	93	0
Number of observation wells	267	197
Number of injection wells to be added during 1969-70 water year	0	17
Number of observation wells to be added during 1969-70 water year	0	0

The barrier is designed to halt the eastward movement of the salt water front by creating a mound of fresh injected water inland from the front. Water for the barrier is purchased by the Central and West Basin Water Replenishment District and delivered to the barrier by the Metropolitan Water District.

Dominguez Gap Barrier Project

In the second area of intrusion along San Pedro Bay, Los Angeles County Flood Control District is constructing additional protective facilities for the West Coast Basin. When the first phase of the project is complete in the summer of 1970, 17 injection wells will be ready for use. The designed project, when completed, will operate in a manner similar to the West Coast Basin barrier project and will consist of 29 injection wells, 197 observation wells, a chlorination station, and 34,000 feet of supply and disposal pipeline and pressure regulating facilities.

Construction Projects Affecting Water Supply

There are three major construction projects currently in progress that will significantly affect the West Coast Basin's water supply. These projects are:

1. The California State Water Project. This largest water project ever undertaken will bring water from the Feather River in Northern California to Southern California by 1971. Approximately 90 percent of the facilities needed to convey Northern California water to the South have been completed or are under construction.
2. The Metropolitan Water District's proposed additions to its distribution system. Important parts of the addition are the Second Lower Feeder and the Sepulveda Feeder. Construction of the Sepulveda Feeder pipeline in the San Fernando Valley is 70 percent complete. Construction of 1.38 miles of concrete pipelined tunnel 8 feet in diameter in the Encino area, is 25 percent complete. On

the Lower Feeder, construction of approximately 10 miles of concrete pipeline 78 inches in diameter, located between Alameda Street in Los Angeles County and Palos Verdes Reservoir, is 79 percent complete. Each will carry Northern water into the West Coast Basin.

3. The City of Los Angeles is currently constructing the second barrel of its Owens River-Mono Basin Aqueduct. The second barrel will actually terminate in the San Fernando Valley but some of the Owens River water eventually crosses the Santa Monica Mountains and moves southward into the West Coast Basin. As of September 1969, 84 percent of construction was completed and a target date of May 7, 1970, set for operation.

One other project of considerable interest to West Coast Basin water users is the Los Angeles County Joint Sanitation District's plan to reclaim waste water. Although none of the proposed facilities will be located in the West Coast Basin, considerable benefit from spreading water in the forebay areas of Central Basin may eventually materialize. There is also speculation that reclaimed water may be used to operate the two sea-water barrier projects in the basin.

Water Quality

The largest single problem facing mankind today is pollution. There are many sources of pollution and many types of pollution. Pick up any newspaper or national magazine; the odds are that it will have an article on pollution. Most of the articles deal with air pollution and surface water pollution. However, it is no secret that even underground water is endangered by pollution.

During the water year, a giant step was taken toward the control of ground and surface water pollution contamination. During the year, the California Water Quality Improvement Act of 1969 (AB 413) was signed by the Governor. This Act and related Act (AB 412) will become operative on January 1 of 1970. They constitute one of the most stringent water quality control laws in the nation, and completely revise the State's water pollution and water quality control laws.

Under the new Act the regional boards will be able to enforce discharge requirements directly without showing the existence of conditions of pollution or nuisance. If a discharger violates requirements of the Boards, and no action is taken to correct deficiencies in discharge, the Board may request enforcement by the Attorney General. Violations of a regional board cease and desist order could result in a maximum fine of \$6,000 for each day of violation.

The battle for good quality water in the West Coast Basin began many years ago. In fact, it was essentially a water quality problem that prompted the West Coast Basin litigation. Many of the aquifers underlying the Los Angeles Coastal Plain are separated from each other by impervious material. However, some of the aquifers are hydraulically connected to the ocean, so occasionally one or more adjacent aquifers may become impaired by sea water. If a well is drilled downward through two aquifers, one clean, one polluted, without using proper casing techniques, water can move from the polluted aquifer to the unpolluted one. Obviously, this is an undesirable condition.

The Department of Water Resources has long recognized that such a condition should be prevented. After an extensive investigation, the Department published Bulletin No. 74, "Water Well Standards: State of California" in February 1968 and Bulletin No. 107 "Recommended Well Construction and Sealing Standards for Protection of Ground Water Quality in West Coast Basin, Los Angeles County," in August 1962. Bulletin No. 107 and its appendixes recommended specific well construction and destruction standards for the West Coast Basin. Even now, Bulletin No. 74 standards are being adopted by local agencies and municipalities in the West Coast Basin. The Los Angeles Regional Water Quality Control Board No. 4 held hearings on the adoption of these standards in 1969. The Board will disseminate a resolution on January 1970, requesting that standards be adopted by all concerned and that they be so adopted within 6 months of service. The Watermaster urges unanimous adoption in the basin to preserve and protect your valuable water supply.

The Department of Public Health, Bureau of Sanitary Engineering, recently published an "Investigation of Ground Water Quality Problems in the Central Basin of Los Angeles County". If you are interested in the ground water quality of the Coastal Plain, we recommend that you read this report. It discusses many of the water quality problems that may already, or will in the future, face water users in the West Coast Basin.

Solid waste disposal has become a major problem in Southern California during the past 25 years. Today, the average Californian is generating five pounds of solid waste every day of the year. It has to be disposed of somewhere.

Good dumpsites are becoming more difficult to find each year. In recent years, tremendous pressure to use abandoned gravel pits for dumpsites has developed. The Chandler Pits just south of Pacific Coast Highway in the West Coast Basin are currently being considered for disposing of solid wastes.

Several applications for permission to use the Chandler Pits for dumpsites have been refused because of potential danger to ground water. The Central and West Basin Water Replenishment District, the West Basin Water Association and other agencies have vigorously opposed these applications. On December 1968, the Regional Board reaffirmed its original findings, setting a restriction on Chandler Pits to Class III inert material. The applicant had requested permission for Class II, decomposable solid waste for the pits. As a result, the applicant appealed to the State Water Quality Control Board for which several hearings had been scheduled, the latest in October 1969.

Ground Water Levels

Every water well owner in the West Coast Basin has a keen interest in the location of the ground water surface. After all, the cost of pumping water is largely dependent on the distance the water must be lifted.

Plates 2 and 3 show the approximate elevation (from sea-level) of the water surface in the Silverado aquifer (the most productive aquifer) as the surface existed in the spring of 1969 and the fall of 1969. Note: The Silverado aquifer varies from 100 to 500 feet in thickness and underlies most of the West Coast Basin. It is, by far, the most productive aquifer yielding about 80 to 90 percent of the basin's annual extraction.

LINE OF EQUAL WATER LEVEL ELEVATION
AT WELLS IN THE SILVERADO AQUIFER
SPRING 1969

OCEAN
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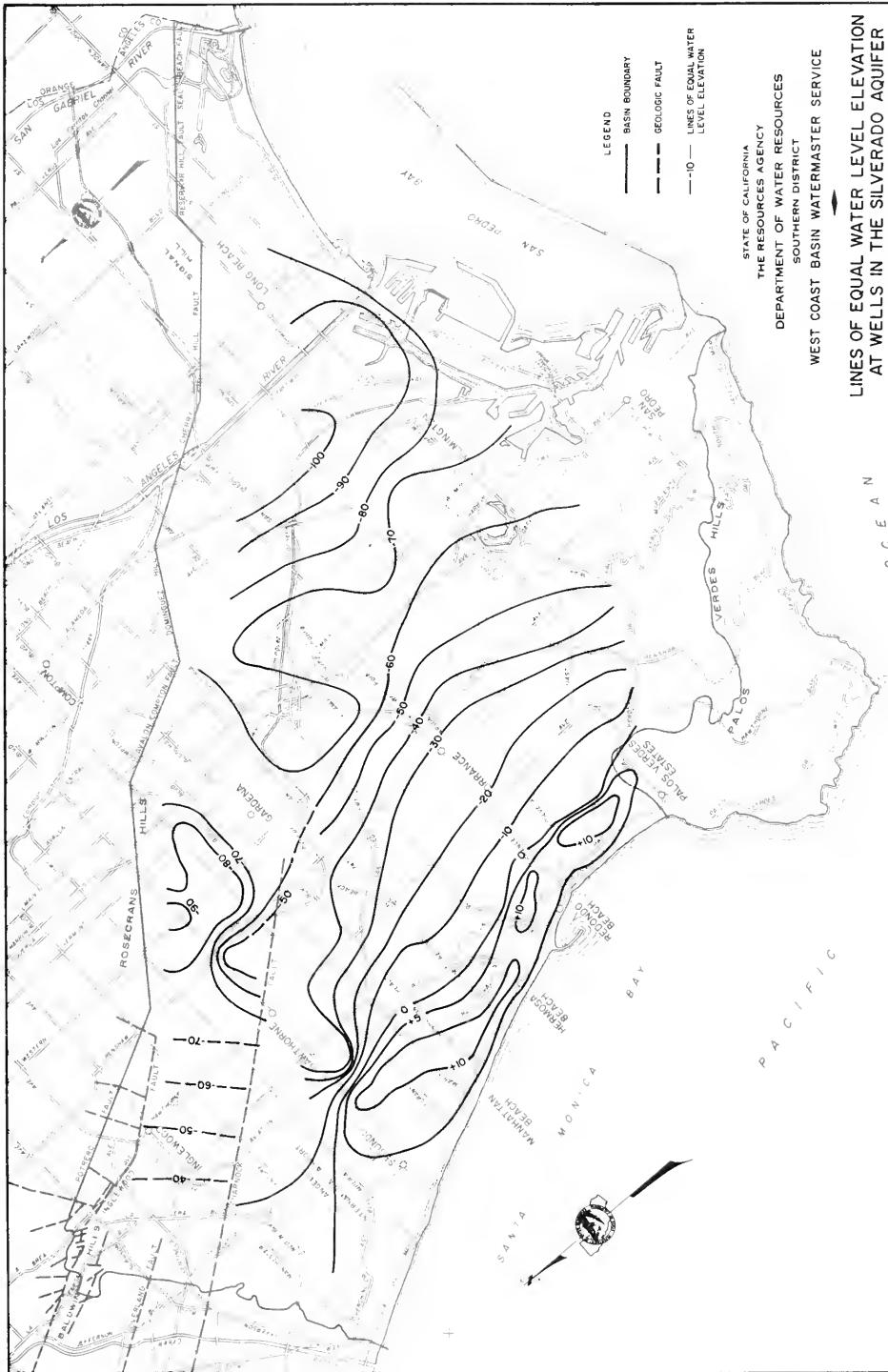
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SOUTHERN DISTRICT
WEST COAST BASIN WATERMASTER SERVICE

SCALE OF MILES
1659

— 10 — LINES OF EQUAL WATER
LEVEL ELEVATION

— BASIN BOUNDARY

— GEOLOGIC FAULT



Figures 1, 2, and 3 offer additional water level information in the form of selected hydrographs. These particular hydrographs are representative of the several aquifers underlying the basin. In general, they show that the water surface has stabilized and, in some cases, risen slightly because of recharge operations and changing extraction patterns. Plate 4 concludes our description of underground water conditions. It shows the change in ground water storage that occurred between October 1968 and October 1969.

The volume of ground water stored in the West Coast Basin is constantly changing. The change in storage depends on variations in precipitation, subsurface inflow and outflow, artificial recharge, and extractions. Hence, Plate 4 quickly shows whether the overall ground water situation improved or deteriorated during the past water year.

Ground water conditions in the heavily pumped areas generally deteriorated during the 1968-69 water year. Plate 4 shows a decrease in storage in the southeastern part of the basin and an increase in storage in the northern and coastal area which is being recharged by the barrier project.

In Lieu Replenishment

Four years ago, during the 1965-66 water year, the Central and West Basin Water Replenishment District began a program of in lieu replenishment. The program is authorized by Section 60230 of the California Water Code.

In effect, the Replenishment District may contract with any producer having access to supplemental water to have the producer use supplemental water instead of pumping water from the ground.

The District's program of in lieu replenishment has the following benefits:

1. It may be used to alter pumping patterns within a ground water basin.
2. It may be used to replenish areas of low transmissibility where conventional recharge techniques are ineffective.
3. It may be used to heighten the effect of injecting water to form a sea-water barrier by reducing extractions in the vicinity.
4. It may be used to reduce the amount of replenishment water purchased by the District.
5. It may be used to reduce the annual ground water extraction from the West Coast Basin.

When the District first announced its intention to begin the in lieu replenishment program, several West Coast Basin producers expressed an interest. However, the only producer to actually participate in the program has been the California Water Service Company. The results of the program are summarized on the next page.

Year	Water : Replenishment	Amount contracted to in lieu	Contract price, dollars per acre-foot	Total payment
1965-66		744.59	\$ 12.33	\$ 9,180.79
1966-67		850.47	14.14	12,027.06
1967-68		850.00	13.36	11,356.00
1968-69		850.00	14.25	12,112.50

The Watermaster believes that the District's in lieu replenishment program is an effective basin management tool. Significant beneficial effects on the West Coast Basin could result from an enlarged program. Therefore, anyone interested in participating or learning more about the program should contact the Central and West Basin Water Replenishment District at 7439 East Florence Avenue, Downey, California.

WATER LEVEL ELEVATION AT WELLS IN FEET IN U.S.G.S. DATUM

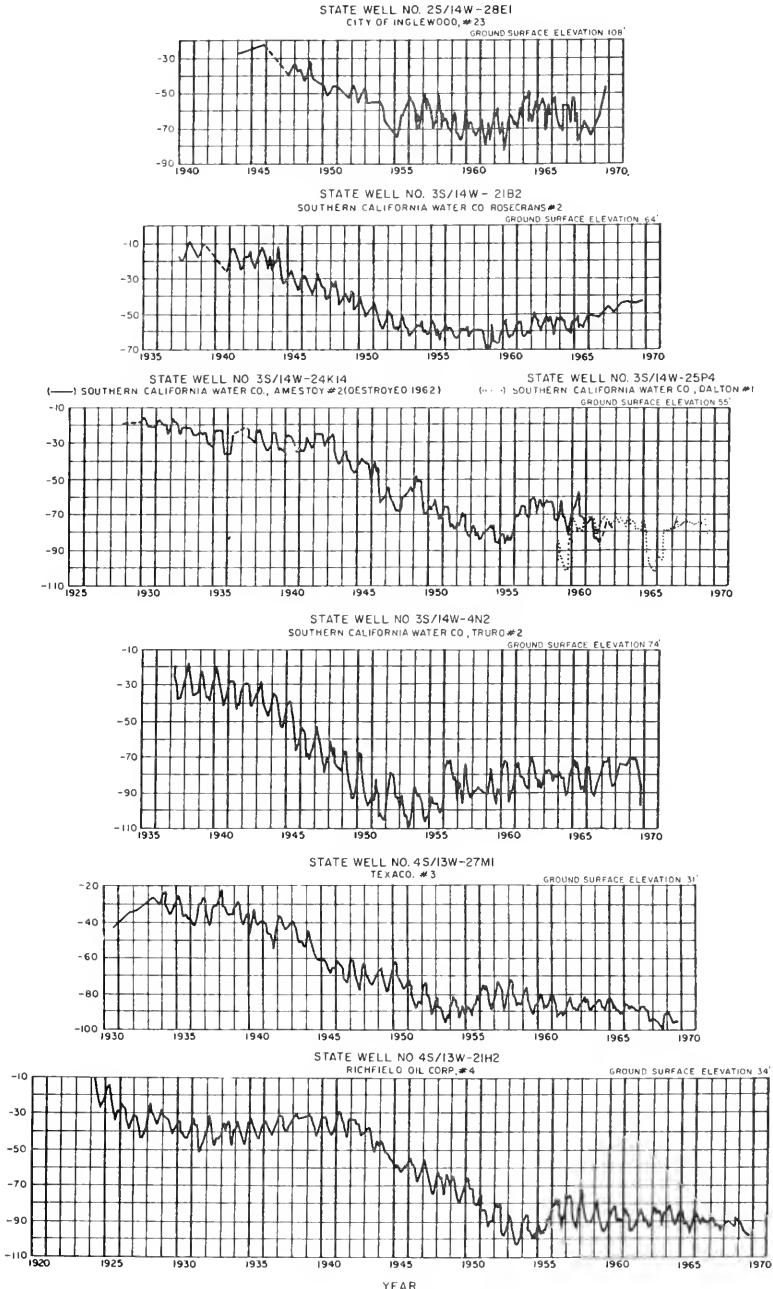


Figure I — FLUCTUATIONS OF WATER LEVEL ELEVATIONS AT WELLS IN THE SILVERADO AQUIFER

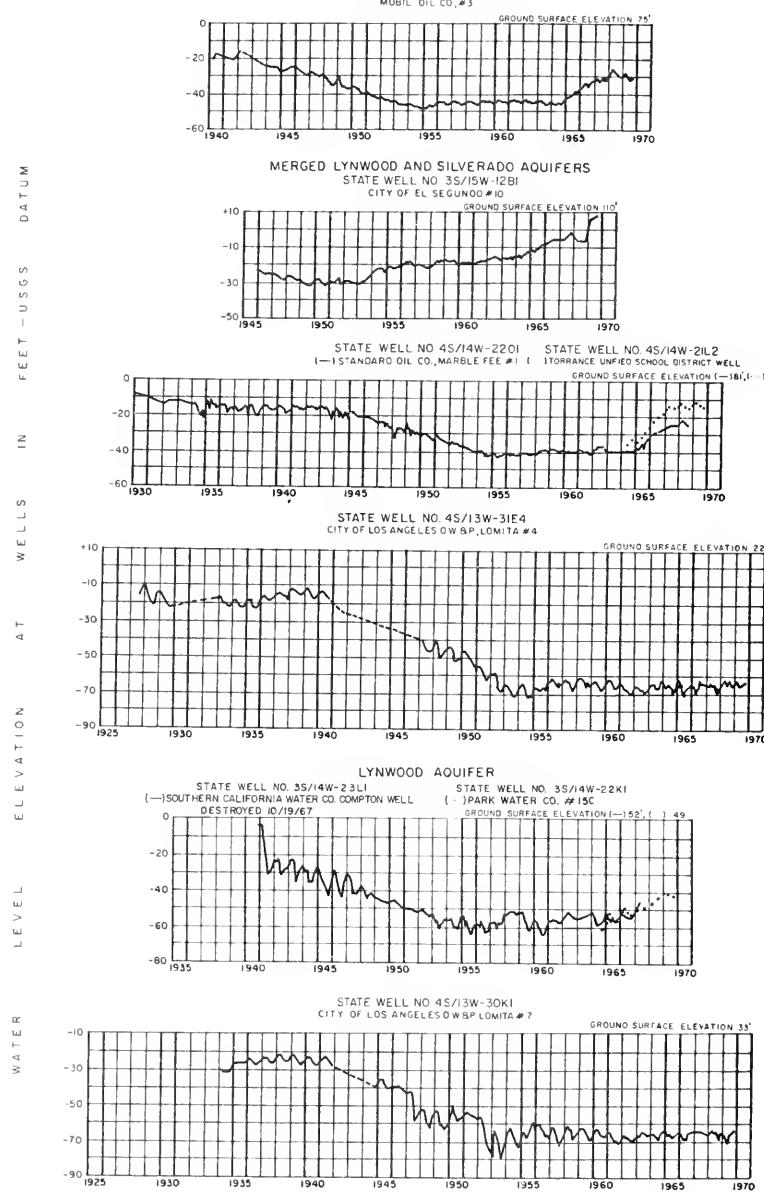
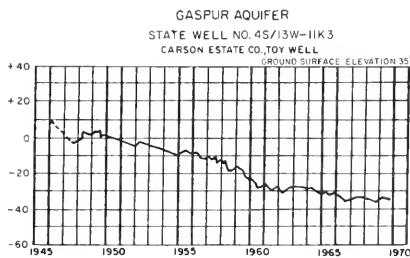
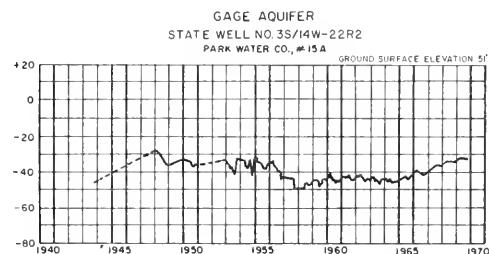
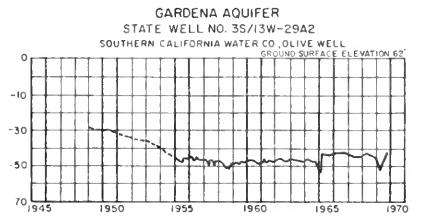


Figure 2 -- FLUCTUATIONS OF WATER LEVEL ELEVATIONS AT WELLS
IN THE MERGED PHASES OF SILVERADO AND LYNWOOD AQUIFERS

LEVEL AT WELLS IN FEET — U.S.G.S. DATUM



WATER LEVEL

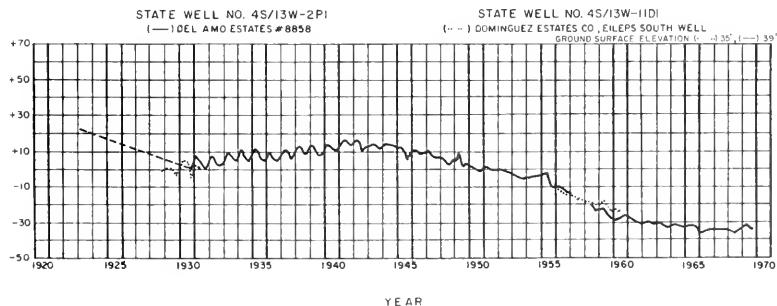
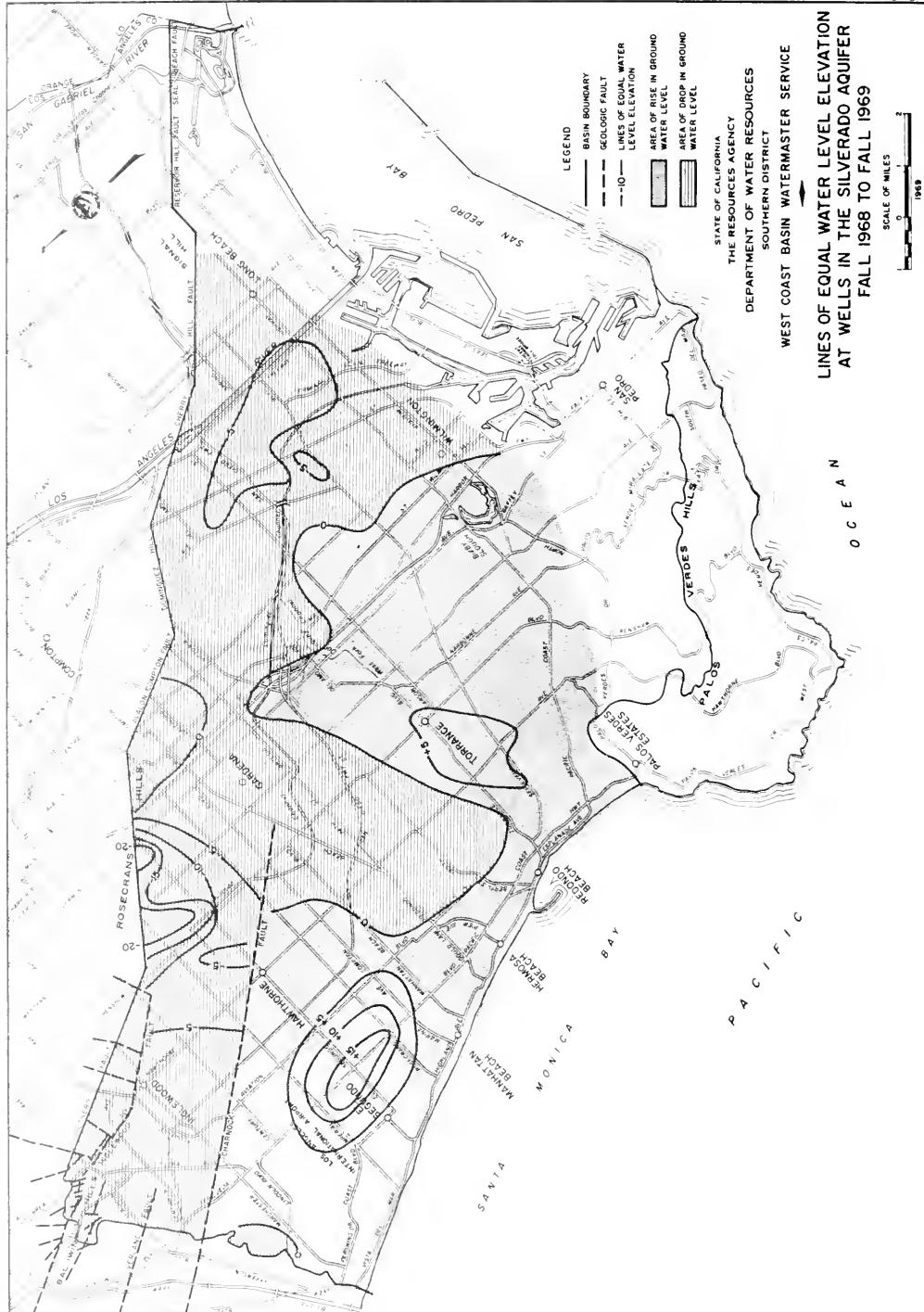


Figure 3—FLUCTUATIONS OF WATER LEVEL ELEVATIONS AT WELLS IN THE UPPER PLEISTOCENE AND RECENT AQUIFERS



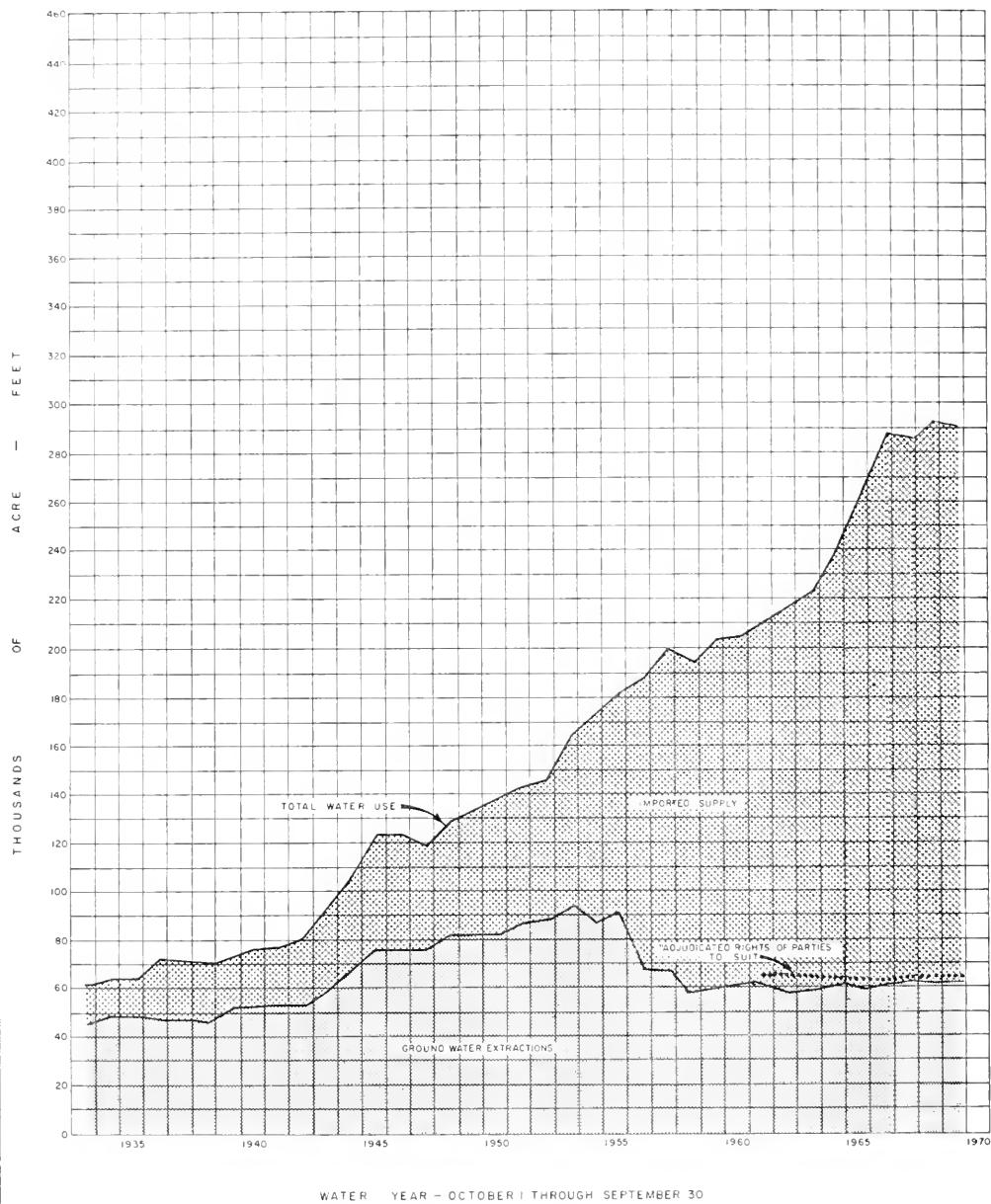


Figure 4 - GROUND WATER EXTRACTIONS AND TOTAL WATER USE
BY PARTIES TO WATERMASTER SERVICE

CHAPTER III. WATER USE

In the year 1968-69, water purveyors in the West Coast Basin served more than 238,000 acre-feet of water to their customers. This represents a 55,000 acre-foot drop in water use when compared to the prior water year.

A rapid population increase in the West Coast Basin area has caused the water demand to increase substantially since 1943. Between 1943 and 1955, ground water from the West Coast Basin served most of the demand. However, the Judgment reduced extraction to about 60,000 acre-feet annually, so imported water rapidly became the largest component of the water supply used in the basin.

Figure 4 graphically illustrates the annual ground water extraction and total water use from 1933 to the present. Much of the increased demand during the past five years may be attributed to the barrier projects. However, the West Basin Barrier was completed last year, so the demand for that purpose will probably level off and stabilize soon.

Figure 5 provides another graphical analysis of the monthly relationship between rainfall, ground water extractions, and imported supplies. It is quite obvious that climatic conditions play an important role in water demand.

Ground Water Extractions

The West Coast Basin Judgment limits the amount of ground water that each party can extract annually from the Basin or release to the Exchange Pool for pumping by other parties. Recipients of exchange water may pump the amount released to them in addition to their Adjudicated Right. Table 4 is a balance sheet summarizing each party's "water account" by listing each party's Adjudicated Right (see Appendix A for any changes), carryover, exchange pool transaction, and ground water extraction during the 1968-69 water year.

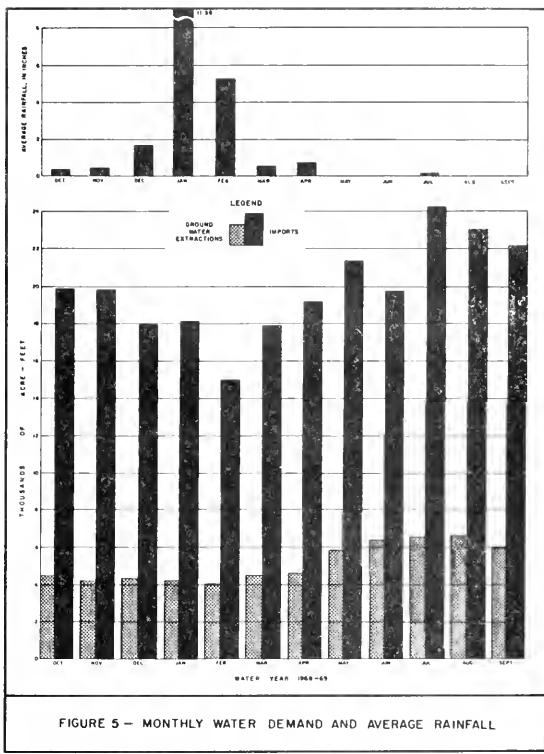


FIGURE 5 - MONTHLY WATER DEMAND AND AVERAGE RAINFALL

DEPARTMENT OF WATER RESOURCES, SOUTHERN DISTRICT, 1969

TABLE 4
ADJUDICATED RIGHTS AND AMOUNT OF WATER PUMPED AND EXCHANGED
In acre-feet

Party	(1) : Adjudicated : Right : from 1967-68	(2) : Allowable : carryover : or sold (-)	(3) : Exchange water : purchased (-) : or sold (-)	(4) : Net : leases ^{a/} : or sold (-)	(5) : Allowable : extraction : (1)+(2)+(3)+(4)=(5)	(6) : Amount : pumped : (5)-(6)=7	(7) : Balance : pumped : (5)-(6)=7	(8) : Allowable : carryover : into 1969-70
ABC Nursey, Incorporated	20.30	- 1.34b/	+ 6.00	24.96	25.18	- 0.22	+ 0.22	
America's Plant Growers, Incorporated	10.00	+ 8.54b/	+ 24.00	42.58	19.55	+ 23.03	+ 15.03 ^{c/}	
Associated Southern Investment Company	46.70	0.00	- 0.00	- 46.70	0.00	0.00	0.00	
Atlantic Richfield Company	4,428.00	+ 4.64	0.00	+ 5,253.00	9,685.64	9,566.95	+ 118.69	+ 118.69
Balman, Frank, Estate of	7.00	0.00	- 7.00	0.00	0.00	0.00	0.00	0.00
California Water Service Company	3,071.00	+ 307.10	0.00	3,378.10	2,219.57	+ 1,158.53	+ 307.10	
Carson-Madrons Company	104.00	0.00	0.00	- 104.00	0.00	0.00	0.00	0.00
Chandler's Palos Verdes Sand and Gravel Corporation	294.20	+ 29.42	0.00	323.62	306.20	+ 17.42	+ 17.42	
Coast Forest Products	3.40	+ 2.00	0.00	5.40	0.00	+ 5.40	+ 2.00	
Columbia Broadcasting System, Incorporated	9.50 ^{d/}	+ 2.00	0.00	- 11.50	0.00	0.00	0.00	0.00
Curtis, Owen W.	0.36	+ 0.36	0.00	0.72	0.05	+ 0.67	+ 0.36	
Delaney, Golds, Estate of	4.10	+ 2.00	0.00	6.10	0.00	+ 6.10	+ 2.00	
Desser Enterprises	0.00	+ 1.44b/	+ 2.00	3.44	0.17	+ 3.27	+ 3.27 ^{d/}	
Dominguez Water Corporation	10,188.25 ^{e/}	- 247.77	0.00	- 858.40	9,082.08	8,577.26 ^{c/}	+ 504.88	+ 504.88
El Segundo, City of	953.00	0.00	- 953.00	0.00	0.00	0.00	0.00	0.00
Engelstad, Jake ^{f/}	14.10	+ 2.00	0.00	16.10	0.00	+ 16.10	+ 2.00	
Ethchemedy, Caroline, Estate of	8.20	+ 2.00	0.00	10.20	0.00	+ 10.20	+ 2.00	
Flesh, Emery & Andor Pasternak, et al.	3.50	+ 2.00	0.00	5.50	0.00	+ 5.50	+ 2.00	
Fletcher Oil and Refining Company	86.30	+ 0.67	0.00	86.97	89.96	- 2.99	- 2.99	
Fujimoto, Samuel R. & Raymond S.	20.00	+ 2.00	0.00	22.00	6.13	+ 15.87	+ 2.00	
Gillingham, Florence R., et al.	2.40	0.00	- 2.40	0.00	0.00	0.00	0.00	0.00
Gonzales, Felipe	34.30	0.00	- 34.30	0.00	0.00	0.00	0.00	0.00
Grant, John, Estate of	59.00	0.00	- 59.00	0.00	0.00	0.00	0.00	0.00
Harris Tube, Incorporated	0.70	+ 0.70	0.00	1.40	0.00	+ 1.40	+ 0.70	
Hawthorne, City of	1,882.00	+ 188.20	0.00	2,070.20	2,055.04	+ 15.16	+ 15.16	
Hillside Memorial Park	29.20	+ 3.46b/	+ 36.00	68.66	58.96	+ 9.70	+ 2.92	
Hollywood Turf Club	282.00	- 3.26	0.00	278.74	196.93	+ 81.81	+ 28.20	
Industrial Chemical Division, Allied Chemical Corporation	255.00	+ 25.50	0.00	280.50	135.12 ^{f/}	+ 145.38	+ 25.50	
Inglewood, City of	4,383.80 ^{e/}	- 35.68	0.00	4,383.12	4,270.07 ^{c/}	+ 78.05	+ 78.05 ^{g/}	
Inose, Kenichi	5.40 ^{d/}	- 3.11	+ 13.00	+ 2.20	17.49	12.88	+ 4.61	+ 2.12 ^{g/}
Ishibashi, Aki	0.00	- 5.09	+ 20.00	14.91	31.35	- 16.44	- 16.44	
Jenkins, Harry C.	1.80	+ 1.80	0.00	3.60	0.00	+ 3.60	+ 1.80	
Johns-Manville Products Corporation	881.00	- 6.94	0.00	874.06	787.74	+ 86.32	+ 86.32	
Joughin Torrance Ranch	20.25	+ 2.03	0.00	22.28	0.00	+ 22.28	+ 2.03	
Jungquist, Fred A.	3.70	0.00	- 3.70	0.00	0.00	0.00	0.00	0.00
Lemens, Alfred	0.70	+ 0.70	0.00	1.40	0.00	+ 1.40	+ 0.70	
Leuzinger, Emma L.	1.40	+ 1.40	0.00	2.80	0.00	+ 2.80	+ 1.40	
Long Beach, City of	0.70	+ 0.70	0.00	1.40	0.00	+ 1.40	+ 0.70	
Lopes, Frank	3.70	+ 2.00	0.00	5.70	0.00	+ 5.70	+ 2.00	
Los Angeles, City of	1,503.00	- 0.01	0.00	1,502.99	1,503.31	- 0.32	- 0.32	
Los Angeles County-Alondra Park	67.70	0.00	0.00	67.70	527.85	- 460.15 ^{b/}	- 460.15 ^{b/}	0.00
Los Angeles County Sanitation District No. 2	102.00	- 27.03	0.00	74.97	72.06	+ 2.11	+ 2.11	
Los Angeles County Waterworks District No. 13	1,352.00	+ 135.20	0.00	1,487.00	568.14 ^{b/}	+ 918.75 ^{b/}	+ 132.20	
Los Angeles County Waterworks District No. 22	551.00	0.00	0.00	551.00	592.33	+ 41.33 ^{b/}	+ 0.00	
Los Angeles County-Western Avenue Golf Course	290.00	+ 29.00	0.00	355.00	183.69	+ 141.91 ^{b/}	+ 29.60	
Loyola University of Los Angeles	48.10	0.00	0.00	- 48.10	0.00	0.00	0.00	0.00
Manhattan Beach, City of	1,131.20	+ 1.20 ^{b/}	0.00	- 1,100.00	32.40	32.82	- 0.42	- 0.42
Mayflower Nurseries	0.00	+ 1.72 ^{b/}	+ 7.00	8.72	4.89	+ 3.83	+ 3.83 ^{d/}	
McDonald Douglas Corporation	1.70	+ 1.70	0.00	3.40	0.05	+ 3.35	+ 1.70	
Mobil Oil Corporation	2,570.00	- 14.85	0.00	+ 1,500.00	4,055.15	4,050.95	+ 4.20	+ 4.20
Moran, Ronald E.	9.00 ^{d/}	+ 2.00	0.00	11.00	0.00	+ 11.00	+ 2.00	
Mori, Roy H. and Kenji	5.60	+ 2.00	0.00	7.60	0.00	+ 7.60	+ 2.00	
Murdock, George R.	1.37	+ 1.37	0.00	2.74	0.00	+ 2.74	+ 1.37	
Morair, A Division of Northrop Corporation	38.15	+ 3.82	0.00	41.97	0.00	+ 41.97	+ 3.82	
Otani, Chiato	0.00	- 38.18	+ 65.00	+ 30.00	56.82	61.68	+ 4.86	+ 4.86
Pacific Crest Cemetery Company	39.40	+ 3.94	0.00	43.34	33.09	+ 10.25	+ 3.94 ^{d/}	
Palos Verdes Begonias Farm	0.00	+ 0.63 ^{b/}	+ 3.00	3.63	2.34	+ 1.29	+ 1.29 ^{d/}	
Palos Verdes Water Company	999.00	0.00	- 999.00	0.00	0.00	0.00	0.00	0.00
Park Water Company	160.00	- 11.02	+ 160.00	308.98	299.14	+ 9.84	+ 9.84	
Phillips Petroleum Company	167.00	+ 16.70	- 161.00	22.70	0.00	+ 22.70	+ 16.70	
Rehbar, Josephine P.	2.20	0.00	0.00	2.20	0.00	0.00	0.00	0.00
Rockwell, Michael L.	0.10	+ 0.10	0.00	0.20	0.00	+ 0.20	+ 0.10	
Roman Catholic Archbishop of Los Angeles	72.30	- 93.41	+ 138.00	116.89	116.49	+ 0.40	+ 0.40	
Santa Fe Land Improvement Company	39.50	0.00	- 39.50	0.00	0.00	0.00	0.00	0.00
Sheets, Esther M.	5.50	+ 2.00	0.00	7.50	1.06	+ 6.44	+ 2.00	
Shell Oil Company	4,516.00	+ 271.85	0.00	4,787.85	4,804.85	- 17.00	- 17.00	
Shindia Brothers Incorporated	22.50	+ 2.25	0.00	24.75	17.54	+ 7.21	+ 2.25	
Southern California Edison Company	10.40	0.00	- 10.40	27.10	6.84	+ 20.26	+ 2.71	
Southern California Water Company	6,548.64	- 0.74	0.00	6,547.90	6,547.05	+ 0.85	+ 0.85	
Spanish American Institute	44.40	+ 4.44	0.00	48.84	14.96	+ 33.88	+ 4.44	
Sparkletts Drinking Water Corporation	152.60	+ 15.26	0.00	167.86	69.34	+ 98.52	+ 15.26	
Standard Oil Company of California	4,601.30	+ 210.13	0.00	- 3,200.00	1,640.43	1,640.19	+ 28.76	+ 28.76
Stauffer Chemical Company	521.00	+ 23.19	0.00	544.19	291.57	+ 252.62	+ 52.10	
Superior Oil Company	26.40	+ 2.64	0.00	29.04	0.00	+ 29.04	+ 2.64	
Texaco, Incorporated	3,432.00	+ 446.90	0.00	+ 1,037.00	4,915.90	4,431.30	+ 484.60	+ 446.90

TABLE 4
ADJUDICATED RIGHTS AND AMOUNT OF WATER PUMPED AND EXCHANGED
In acre-feet
(continued)

Party	(1) Adjudicated Right	(2) Allowable carryover from 1967-68	(3) Exchange water purchased (+) or sold (-)	(4) Net acre- feet lessers/ leases	(5) Allowable extraction (1)+(2)-(3)-(4)=(5)	(6) Amount pumped	(7) Balance pumped (5)-(6)-7	(8) Allowable carryover into 1969-70
Torrance, City of	3,795.73	+ 35.07 ^b	0.00	+ 11.50	3,822.30	3,868.66	- 26.36	- 26.36
Union Nursery, Incorporated	4.70	+ 2.46 ^c	+ 10.00		17.16	10.39	+ 6.77	+ 2.07 ^d
United Oil Company of California	2,670.00	- 246.38	0.00		2,421.62	2,270.69	+ 19.93	+ 150.93
United States Steel Corporation	1,791.00	+ 179.10	- 299.60	- 450.00	1,220.50	1,221.03	+ 8.47	+ 8.47
Watson Land Company	42.60	+ 0.48	0.00		43.08	17.10	+ 25.98	+ 4.26
Wiesburn School District	8.20	0.00	0.00		8.20	0.00	+ 8.20	+ 2.00
Ziegler, Maxwell T.	0.00	- 21.52	+ 45.00		23.48	25.09	- 1.61	- 1.61
TOTALS	64,468.25	+1230.12	0.00	0.00	65,698.37	61,637.68	-4,060.69	+2042.35

^a/ See Table 8 for explanation of leased or purchased water right entitlements and new parties.

^b/ Includes Exchange Pool water carryover.

^c/ Includes 13.01 acre-feet of Exchange Pool water.

^d/ Includes 1.00 acre-feet of water.

^e/ Includes 17.99 acre-feet extracted by Carson Estate Company.

^f/ Includes extractions by Inglewood Golf Course.

^g/ Includes 0.12 acre-feet of Exchange Pool water.

^h/ Extractions by Los Angeles County; Alondra Park; Waterworks District Nos. 13 and 22; and Western Avenue Golf Course are covered by an equivalent water right in an exchange pool. All three water rights are combined and any remainder is divided between the waterworks districts in proportion to water right.

ⁱ/ Includes 0.07 acre-feet of Exchange Pool water.

The metered ground water production from each active well in the Basin is listed by party in Appendix B, Table B-1. This tabulation shows the total ground water production as reported by each party.

A report on the gross water supply of all parties appears in Table B-2 of Appendix B. The gross water supply includes all sources of water supply necessary to provide each party's total water requirement for its service area, as shown on Plates 5 and 6.

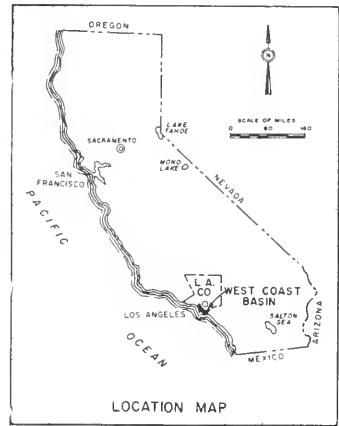
Extractions by Nonparties and Parties with No Adjudicated Right

Several nonparties and parties with zero Adjudicated Rights pump water from the West Coast Basin. Parties with a zero water right have abided by the Judgment by offsetting their extractions with Exchange Pool water purchases. The extraction each pumper reported to the Central and West Basin Water Replenishment District was:

<u>Pumper</u>	<u>State Well No.</u>	<u>Amount pumped, in acre-feet</u>
Cost, Edward	3S/13W-30Q1	0.30
Desser Enterprises*	4S/13W-15Q1	0.17
Ishibashi, Aki*	4S/14W-24A1	31.35
Mayflower Nursery*	3S/14W-25K6	
" "	3S/13W-31B7	4.89
McFadden, John K.	3S/13W-19K2	0.68
Otani, Chisato*	3S/14W-33R4, 33N4	61.68
Palos Verdes Begonia Farm*	4S/14W-21NL	2.34
Pioneer Paper Stock Company	3S/13W-31C2	2.52
Three Star Nursery	3S/14W-33R3	6.50
Ziegler, Maxwell*	3S/13W-31M1	25.09
TOTAL		135.52

*Parties to the Judgment, shown in Table 4.





LIST OF MUNICIPAL, MUTUAL AND PUBLIC UTILITY
WATER SERVICE AGENCIES

Area number	Entity	Location on plate
1	California - American Water Company (Nonparty)	B- 2
1-A	California Water Service Company	F- 5
2	Dominguez Water Corporation	C- 8
3	B Segundo, City of	D- 3
4	Hawthorne, City of	C- 4
5	Inglewood, City of	B- 3
6	Long Beach, City of	C-11
7	Los Angeles, City of	E- 9
8	Los Angeles County Waterworks District No 13	E- 8
9	Los Angeles County Waterworks District No 22	C- 4
9-A	Los Angeles County Waterworks District No 26 (Nonparty)	E- 3
10	Manhattan Beach, City of	E- 4
11	Palos Verdes Water Company	G- 8
12	Park Water Company	C- 5
12-A	Signal Hill, City of (Nonparty)	B-11
13	Southern California Water Company	B- 5
14	Torrance, City of	E- 7

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT
WEST COAST BASIN WATERMASTER SERVICE

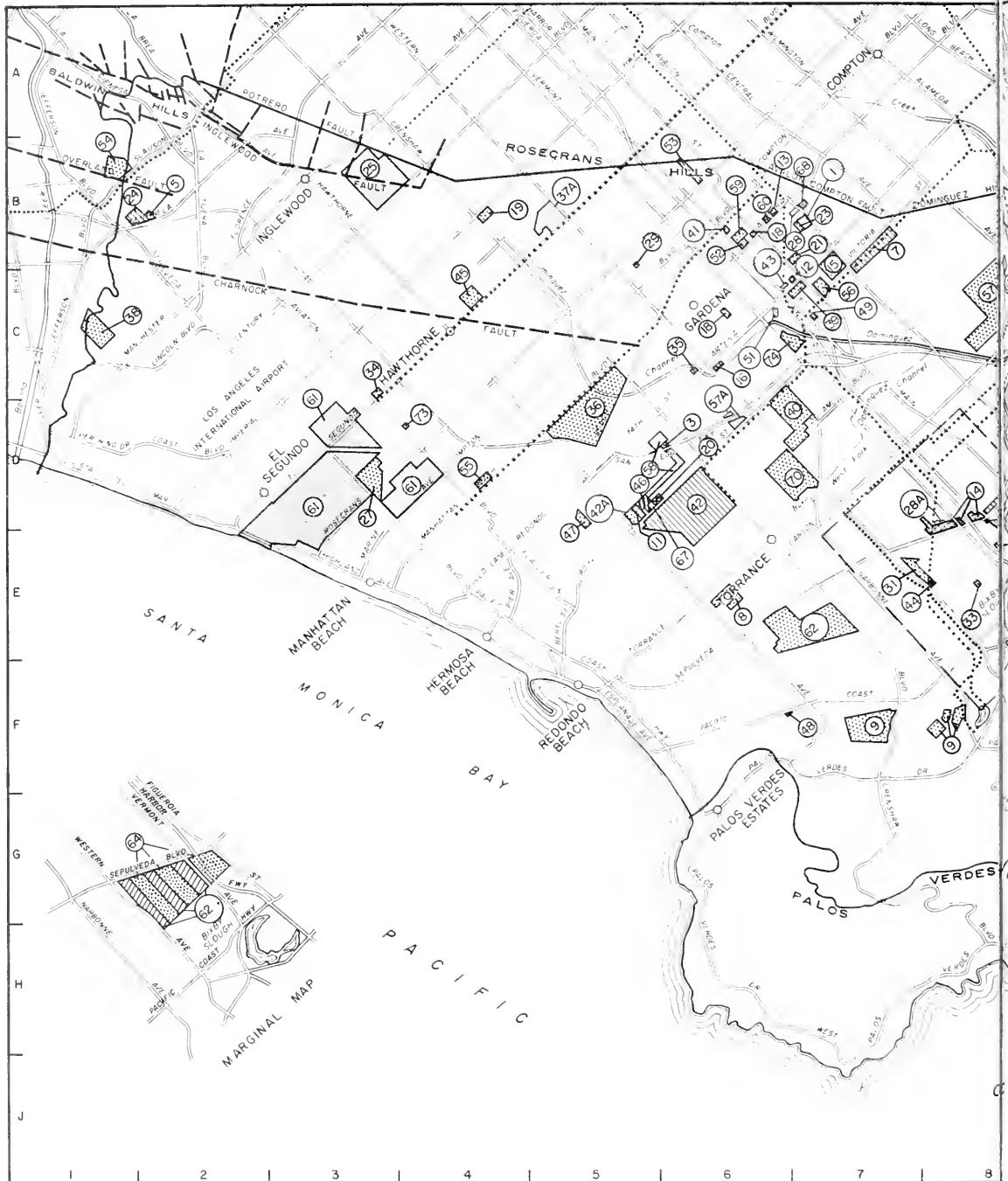
WATER SERVICE AREAS OF
MUNICIPAL, MUTUAL AND PUBLIC UTILITY
WATER SERVICE AGENCIES
SEPTEMBER 1969

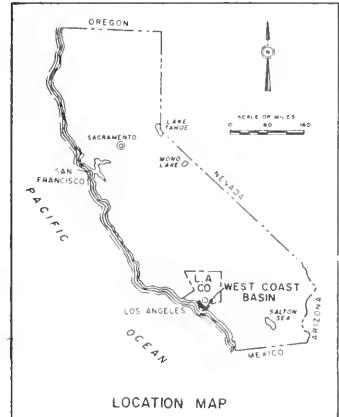
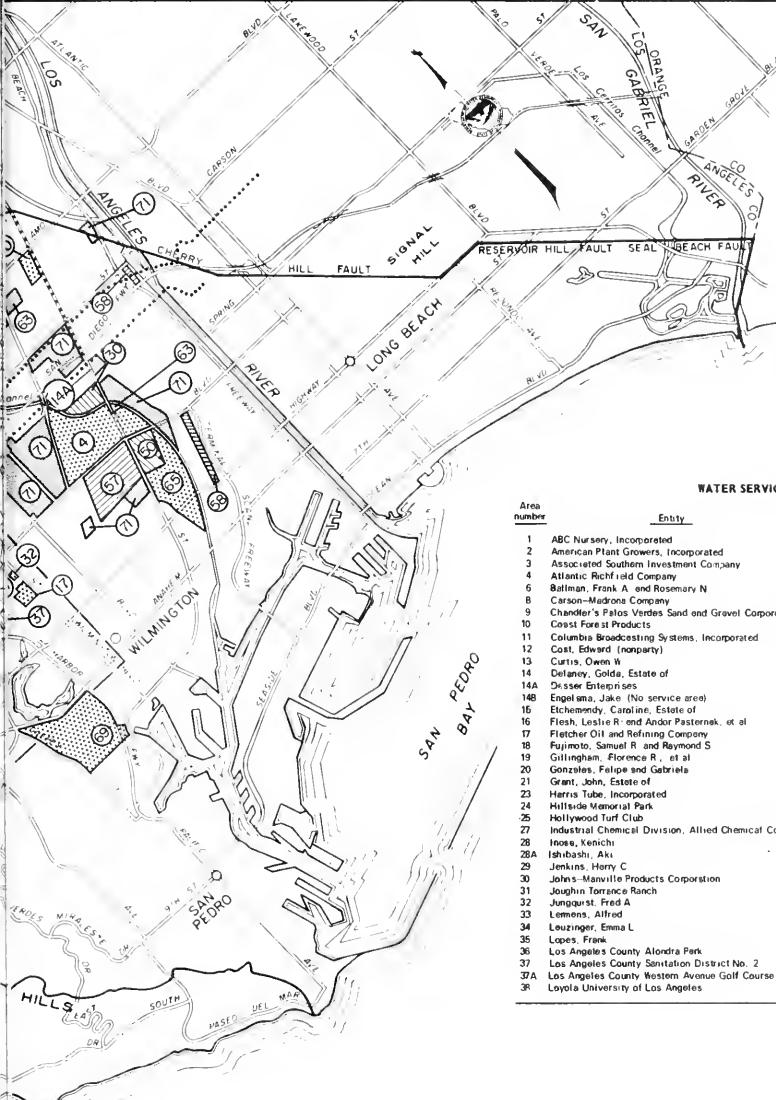


LEGEND

..... DISTRIBUTION SYSTEM OF THE METROPOLITAN
WATER DISTRICT OF SOUTHERN CALIFORNIA

— BOUNDARY





INDEX
WATER SERVICE AREA OF INDIVIDUAL PRODUCERS

Area number	Entity	Location on plate	Area number	Entity	Location on plate
1	ABC Nursery, Incorporated	B-7	39	Mayflower Nurseries	C-6,7
2	American Plant Growers, Incorporated	D-8	40	McDonnell Douglas Corporation	D-6
3	Associated Southern Investment Company	D-6	41	McFadden, John K. (nonparty)	B-6
4	Atlanta Richfield Company	C-9	42	Mobil Oil Corporation	D-6
5	Ballman, Frank A. and Rosemary N.	B-2	42A	Moran, Ronald E	D-6
6	Carlson-Madison Company	E-6	43	Mori, Roy H. and Kenji	C-6
7	Chase, Charles W. and Sand and Gravel Corporation	B-8	44	Murphy, George H.	E-6
8	Crest Forest Products	D-5	45	Narvaez Corporation, Aircraft Division	C-4
9	Columbia Broadcasting Systems, Incorporated	C-7	46	Diani, Chiato	D-5
10	Cost, Edward (nonparty)	B-6	48	Pacific Crest Cemetery Company	D-5
11	Curtis, Owen W	D-8	49	Pelos Verdes Bognus Farm	F-8
12	Delaney, Golde, Estate of	C-9	50	Pet Haven Cemetery (nonparty)	C-7
13	DeVany, Fred E.	B-7	51	Philips Petroleum Company	D-9
14	Englewood Lake (No service area)	C-7	52	Price, Paul S. (nonparty)	C-6
15	Eischenmyer, Caroline, Estate of	C-6	53	Rohr, Josephine P.	R-6
16	Flesh, Lester R. and Andor Pasternak, et al	D-8	54	Roskow, Michael L.	S-6
17	Fletcher Oil and Refining Company	B-6	55	Roman Catholic Archshop of Los Angeles	B-1
18	Fujimoto, Samuel R. and Raymond S	B-4	56	Santa Fe Land Improvement Company	D-4
19	Gillingham, Florence R., et al	D-5	57	Shaw, Dill Company	C-7
20	Gonzales, Faustine and Gabriela	B-7	58	Southern California Edison Company	B-3 D-5,10
21	Graves, Edward E.	C-9	59	Spanish American Institute	B-6
22	Harris Tube, Incorporated	B-2	60	Sparklets Drinking Water Corporation	B-6
23	Hillside Memorial Park	B-3	61	Standard Oil Company of California	D-3
24	Hollywood Turf Club	D-3	62	Standard Oil Company of California, Leases on Isabella J. Granz Estate	G-2
25	Industrial Chemical Division, Allied Chemical Corp	B-7	63	Standard Oil Company of California, Superior Oil Company, Lease on Isabella J. Granz Estate	C-8,9
26	Inoue, Kenichi	D-8	64	Isabella J. Granz Estate	G-2
27	Ishibashi, Aki	B-5	65	Texaco, Incorporated	D-9
28	Jenner, Horst C	E-7,8	67	Three Star Nursey Incorporated (nonparty)	D-5
29	Jones, Maurice	D-8	68	Union Nursey, Inc.	B-7
30	Jones-Mallard Products Corporation	E-8	69	Union Oil Company of California	E-9
31	Jouquin, Torrance Ranch	C-3	71	United States Steel Corporation	D-3
32	Jungquist, Fred A	C-6	72	Watson Land Company	D-4
33	Lemmons, Alfred	D-5	73	Wheeler School District	C-6
34	Leuzinger, Emma L	B-6	74	Ziegler, Maxwell	B-9 C-9, D-9
35	Lopes, Frank	C-1			
36	Los Angeles County Arboretum Park				
37	Los Angeles County Sanitary District No. 2				
37A	Los Angeles County Western Avenue Golf Course				
38	Loyola University of Los Angeles				

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES
SOUTHERN DISTRICT

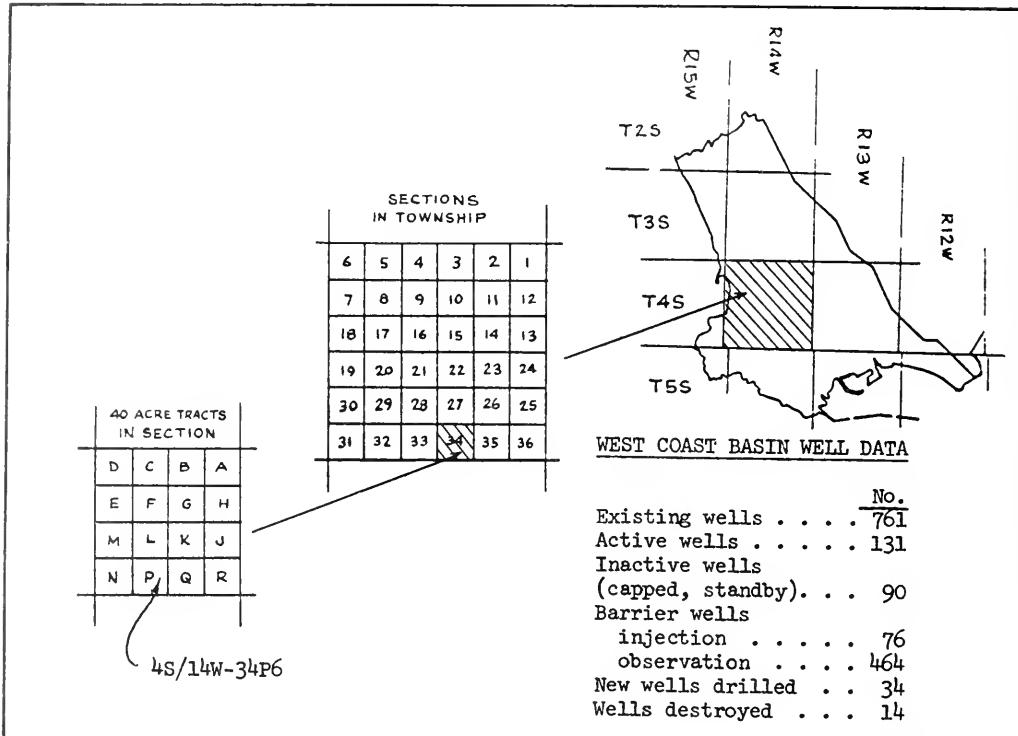
WEST COAST BASIN WATERMASTER SERVICE

WATER SERVICE AREAS OF
INDIVIDUAL PRODUCERS
SEPTEMBER 1969

SCALE OF MILES
0 1 2
1969

Water Wells in the West Coast Basin

Each water well in the West Coast Basin is assigned a state well number to simplify locating the well. The state well numbering system was adopted several years ago from the United States Public Land Survey System. A graphical illustration of the system in the West Coast Basin is shown below.



Each state well number consists of a township, range, and section number; a letter to indicate the 40-acre plot where the well is located; a number to identify the particular well in a section; and the letter "S" indicating that the well is referenced to the San Bernardino Base and Meridian.

For instance, state well number 4S/14W-34P6S would be the sixth well assigned a number in Township 4 South, Range 14 West, 40-acre Tract "P" in Section 34. All wells in Los Angeles County are referenced to the San Bernardino Base and Meridian, so the letter "S" is dropped in this report.

As a matter of course, the Watermaster locates all new wells by surveying them in and assigning new state well numbers. If a well is suspected of being abandoned or destroyed, the Watermaster tags the well, requesting that the owner inform the Watermaster of his intentions. In this manner, the owner may be informed of the proper methods of destroying a well.

Imported Supplies

Earlier it was noted that large quantities of water are imported to the West Coast Basin from other sources. Water from the Colorado River arrives through the facilities of the Metropolitan Water District of Southern California, for distribution by the Cities of Long Beach, Los Angeles, Torrance, and the West Basin Municipal Water District. The City of Los Angeles also imports water from the Owens River-Mono Basin in east Central California. The Dominguez Water Corporation, the City of Long Beach, and the Southern California Water Company import ground water from the Central Basin to supplement other supplies.

All imports to the West Coast Basin, with the exception of imports by two nonparties, are listed in Table 5. The California-American Water Company and City of Signal Hill, both nonparties, imported 1,371 and 909 acre-feet, respectively.

TABLE 5

QUANTITY OF IMPORTED WATER

Entity Importing Water	: Source	: Imported supply, in acre-feet	
		: 1967-68	: 1968-69

Dominguez Water Corporation	1	4,265	3,373
Long Beach, City of	2	30,461	32,153
Los Angeles, City of	4	52,250	53,398
Southern California Water Company	1	1,193	979
Torrance, City of	3	19,319	19,555
West Basin Municipal Water District	3	<u>135,695*</u>	<u>130,818*</u>
TOTALS		243,183*	240,276*

Sources of Imported Water	: Designa- nation	: 1967-68	: 1968-69
		: 1967-68	: 1968-69

Central Basin Ground Water	1	5,458	4,352
Central Basin Ground Water and Colorado River Water	2	30,461	32,153
Colorado River Water	3	<u>155,014</u>	<u>150,373</u>
Owens River-Mono Basin Water and Colorado River Water	4	<u>52,250</u>	<u>53,398</u>
TOTALS		243,183	240,276

*Includes 39,582 and 36,416 acre-feet delivered to Los Angeles County Flood Control District by the City of El Segundo for use in the West Coast Basin Barrier Project in water years 1967-68 and 1968-69, respectively.

Exported Supplies

Exports from the West Coast Basin are small. The City of Inglewood exported 3,245 acre-feet of ground water and Colorado River water to the Central Basin. The City of Los Angeles exported 1,215 acre-feet and the Palos Verdes Water Company exported 6,764 acre-feet of ground water and Colorado River water to portions of their service areas lying west of the Palos Verdes Hills (see Plate 5).

The Roman Catholic Archbishop of Los Angeles (Holy Cross Cemetery) exports and imports water from the basin each day since its service area lies on both sides of the boundary. However, the net export or import is very small and may be disregarded.

CHAPTER IV. ADMINISTRATION OF THE JUDGMENT

The West Coast Basin Judgment was a logical step toward preserving the usefulness of a valuable resource. It provided a flexible tool to limit extractions and still allow a beneficial use of the ground water supply. However, the restrictions on extractions imposed by the Judgment forced the parties to look for other supplies. Fortunately, other sources of water were available. If they had not been, the rapidly increasing demand for water might have literally bankrupted the basin before other basin management techniques could be developed.

Exchange Pool

The Court and parties foresaw that adjudicating the water rights in the West Coast Basin, and limiting the total extractions within the basin, would not be satisfactory to all parties. As a consequence, Paragraph VII of the Judgment was written authorizing a water Exchange Pool to provide additional water rights to members without supplementary supplies. Membership in the Exchange Pool is voluntary, and any party can join by filing an "Intention to be Bound by Paragraph VII of the Judgment" with the Watermaster and the Court.

Once each year, during the month of July, the Watermaster opens the Exchange Pool to permit an inter-member water right exchange in accordance with the Judgment. Tables 6 and 7 summarize last year's Exchange Pool transactions.

TABLE 6

EXCHANGE POOL REQUESTS

Party	: Amount of water received, : in acre-feet	: Cost of : exchange water ^{a/}
ABC Nursery, Incorporated	6.00	\$ 79.70
American Plant Growers, Inc.	24.00	318.80
Desser Enterprises	2.00	26.56
Hillside Memorial Park	36.00	478.19
Inose, Kenichi	13.00	172.68
Ishibashi, Aki	20.00	265.66
Mayflower Nurseries	7.00	92.98
Otani, Chisato	65.00	863.41
Palos Verdes Begonia Farm	3.00	39.85
Park Water Company	160.00	2,125.31
Roman Catholic Archbishop of Los Angeles	138.00	1,833.08
Union Nursery, Incorporated	10.00	132.83
Ziegler, Maxwell T.	45.00	597.75
 TOTALS	529.00	\$ 7,026.80

^{a/} Cost at \$13.2831 per acre-foot.

TABLE 7

EXCHANGE POOL OFFERS

Party	: Amount, in acre-feet:	Price per :	Charge for
	: Offered :	Released :	acre-foot : exchange water
<u>Mandatory Offers</u>			
Grant, John, Estate of	59.00	59.00	\$ 11.00
Phillips Petroleum Company	161.00	161.00	\$ 11.00
Ballman, Frank A., Estate of	7.00	7.00	12.00
Gillingham, Florence R. et al.	2.40	2.40	12.00
United States Steel Corporation	930.00	299.60	15.00
Inglewood, City of	266.80	0	42.30
Shell Oil Company	567.60	0	45.08
Stauffer Chemical Company	89.00	0	60.98 ^{a/}
Los Angeles County Sanitation District No. 2	<u>19.70</u>	<u>0</u>	65.00
TOTALS	2,102.50	529.00	\$ 7,026.80
<u>Voluntary Offers</u>			
California Water Service Company	850.00	0	\$ 28.30
Chandler's Palos Verdes Sand and Gravel Corporation	84.00	0	12.00
Harris Tube, Incorporated	2.70	0	43.00
Wiseburn School District	<u>8.20</u>	<u>0</u>	20.00
TOTALS	944.90		

a/ Cost assuming all of the offered water was sold.

In essence, the Exchange Pool is placed into operation when the Watermaster mails a form on July 1st of each year requesting that each member estimate his water requirement and supply for the approaching water year. If his total supply, including supplemental water, exceeds his estimated requirement, the member must make a Mandatory Offer to lease a portion of his pumping right. The Mandatory Offer should be the difference between his Adjudicated Right and one-half his estimated requirement. Under no circumstance, however, can the Mandatory Offer plus the estimated requirement exceed the total supply. Therefore, the Mandatory Offer must be limited to an amount which can be replaced with supplemental water.

There is another type of offer called the Voluntary Offer. A member may voluntarily offer pumping rights to the Exchange Pool if his water supply exceeds his estimated requirement and no supplementary supply is available. However, the Watermaster must allocate all of the Mandatory Offers before using the Voluntary Offers. Hence, Voluntary Offers have not been used for several years.

The price a member may charge for a Mandatory Offer cannot exceed the cost per acre-foot of replacement water. The price for Voluntary Offers cannot exceed the price per acre-foot charged by the West Basin Municipal Water District for imported water. The Watermaster determines the amount of water required and computes the average price to be paid for requests.

If a member's estimated water requirement exceeds his total water right, including leases, and he has no supplementary supply, the difference may be requested from the Exchange Pool. The cost per acre-foot is the weighted average price per acre-foot of all the offers which are required to meet requests.

Transfers of Adjudicated Rights

The West Coast Basin Exchange Pool is not the only method of obtaining additional pumping rights. Each year there are several lease and sale transactions between parties. Table 8 lists all leases, sales, parties, and amounts involved. Appendix A contains a copy of the document substantiating each transfer.

Appendix A also contains samples of our recommended lease and sale agreements. Most of the documents received by the Watermaster are unnecessarily complex. The Watermaster recommends that all documents be prepared on 8-1/2 x 11-inch paper. Any necessary additions to the recommended agreement may be attached to another page. You need not use these sample documents, but they are sufficient for most purposes.

In order that a water lease agreement be in force during the water year, it must have been signed before or during the water year in question. In addition, a lease or sale document should be filed early with the Watermaster. Failure to submit a lease document or a sale document by September 30 of the water year in question may be considered as evidence that such an agreement was never consummated during such water year.

TABLE 8
TRANSFERS OF ADJUDICATED RIGHTS

Party		Transaction and amount, in acre-feet		Party
	:	:	:	
Associated Southern Investment Company	leased	46.70	to	Southern California Edison Company
Atlantic Richfield Company	leased	1500.00	from	Dominguez Water Corporation
	"	953.00	"	El Segundo, City of
	"	1100.00	"	Manhattan Beach, City of
	"	1700.00	"	Standard Oil Company of California
Carson Estate Company	sold	130.00	to	Dominguez Water Corporation
Carson Madrona-Company	leased	104.00	to	Dominguez Water Corporation
Columbia Broadcasting System, Inc.	sold	3.00	to	Moran, Ronald E.
	leased	11.50	"	Torrance, City of
Dominguez Water Corporation	purchased	130.00	from	Carson Estate Company
	leased	1500.00	to	Atlantic Richfield Company
	"	104.00	from	Carson-Madrona Company
	"	48.10	"	Loyola University of Los Angeles
	"	39.50	"	Santa Fe Land Improvement Company
	"	450.00	"	United States Steel Corporation
El Segundo, City of	leased	953.00	to	Atlantic Richfield Company
Engelsma, Jake	purchased	14.10	from	Hornstra, Wilbur
Gonzalves, Felipe	leased	34.30	to	Texaco, Incorporated
Hornstra, Wilbur	sold	14.10	to	Engelsma, Jake
Inose, Kenichi	purchased	3.50	from	Thaxter, Walter and Lois A. LeNoir
	leased	2.20	"	Rehor, Josephine
Jungquist, Fred A.	leased	3.70	to	Texaco, Incorporated
Loyola University of Los Angeles	leased	48.10	to	Dominguez Water Corporation
Manhattan Beach, City of	leased	1100.00	to	Atlantic Richfield Company
Mobil Oil Corporation	leased	1500.00	from	Standard Oil Company of California
Moran, Ronald E.	purchased	3.00	from	Columbia Broadcasting System, Inc.
Otani, Chisato	leased	30.00	from	Southern California Edison Company
Palos Verdes Water Company	leased	999.00	to	Texaco, Incorporated
Rehor, Josephine P.	leased	2.20	to	Inose, Kenichi
Santa Fe Land Improvement Company	leased	39.50	to	Dominguez Water Corporation
Southern California Edison Company	leased	46.70	from	Associated Southern Investment Company
	"	30.00	to	Otani, Chisato
Standard Oil of California	leased	1700.00	to	Atlantic Richfield Company
	"	1500.00	to	Mobil Oil Corporation
Texaco, Incorporated	leased	34.30	from	Gonzalves, Felipe
	"	3.70	"	Jungquist, Fred A.
	"	999.00	"	Palos Verdes Water Company
Thaxter, Walter and Lois A. LeNoir	sold	3.50	to	Inose, Kenichi
Torrance, City of	leased	11.50	from	Columbia Broadcasting System, Inc.
United States Steel Corporation	leased	450.00	to	Dominguez Water Corporation

Overextractions

Each year some parties extract more water from the West Coast Basin than they are entitled to. The overextractions are usually small, within the tolerance set by the Judgment. The Judgment allows each party to overextract by 2 acre-feet or 10 percent of its Adjudicated Right, on the premise that the over-extraction will be eliminated during the following year. Most over-extractions are the result of an unexpected increase in water demand so it would be unreasonable not to allow some deviation from the limits and guidelines of the Judgment. Table 9 summarizes all overextractions during the water year 1968-69.

TABLE 9

OVEREXTRactions
In acre-feet

Party	(1)	(2)	(3)	(4)	(5)	(6)
	: Adjudicated Right ^a	: Allowable Extraction ^b	: Amount pumped	: Overextraction ^c	: Allowable Extraction ^c	: Overextraction ^c in percent of Adjudicated Right :(4):(1)/100-(6)
	:	:	:(2)-(3)-(4)	:(2)-(3)-(4)	:(2)-(3)-(4)	:(2)-(3)-(4)
ABC Nursery Incorporated	20.30	24.96	25.18	-.22	2.03	1.08
Fletcher Oil and Refining Company	86.30	86.97	89.96	-.299	8.63	3.46
Ishibashi, Aki	0.00	14.91	31.35	-.16.44 ^d	2.00	-
Los Angeles, City of	1,503.00	1,502.99	1,503.31	-.32	150.30	.02
Manhattan Beach, City of	1,131.20	32.40	32.82	-.42	113.12	.04
Otani, Chisato	0.00	56.82	61.68	-.48 ^d	2.00	-
Shell Oil Company	4,516.00	4,787.85	4,804.85	-.17.00	451.60	.37
Standard Oil Company of California	4,601.30	1,611.43	1,640.19	-.28.76	160.13	.62
Torrance, City of	3,795.73	3,842.30	3,868.66	-.26.36	379.57	.69
Ziegler, Maxwell T.	0.00	23.48	25.09	-.1.61	2.00	-
TOTALS	15,653.83	11,984.11	12,083.09	-.98.98	1,571.38	

^a/ Includes water right leases.

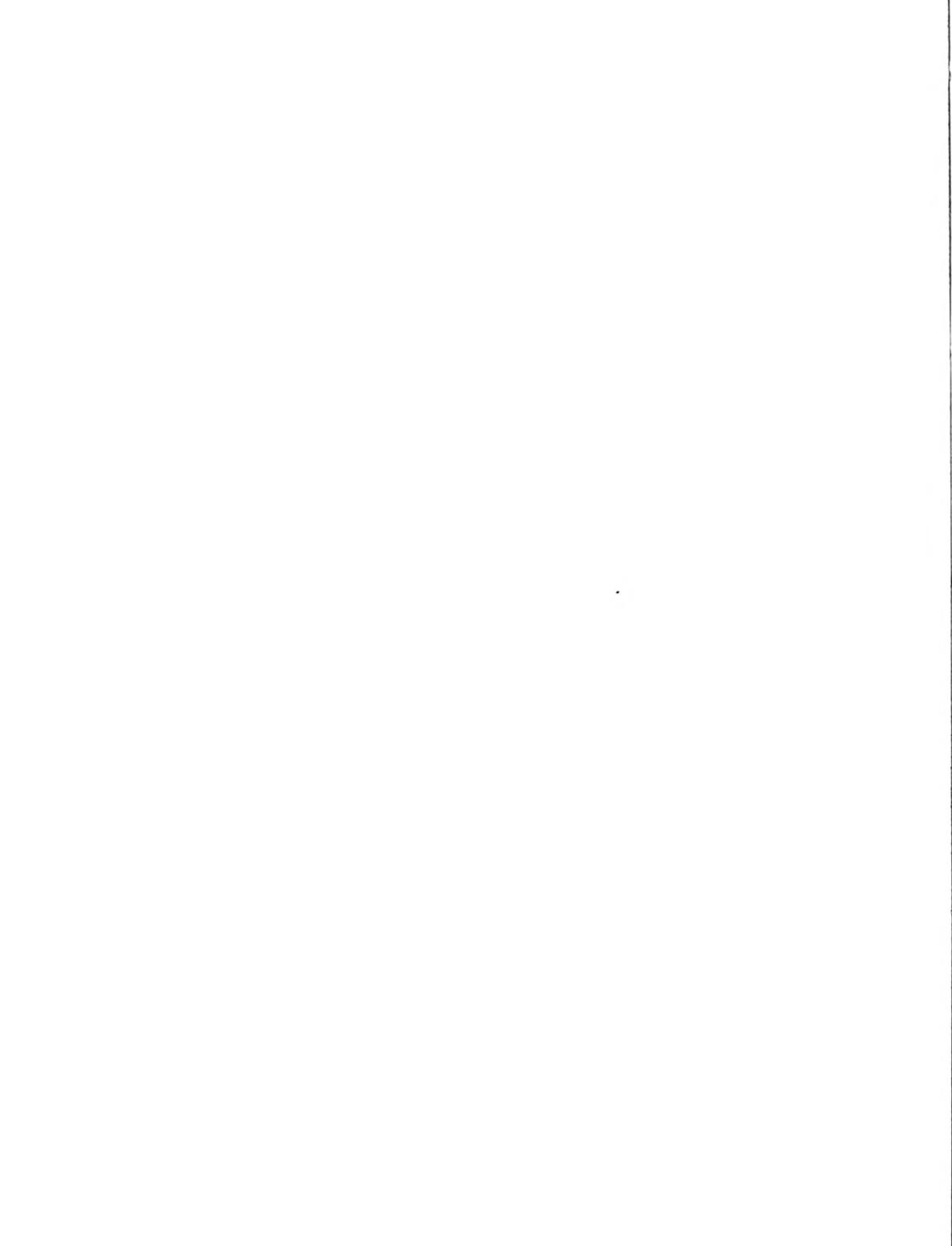
^b/ See Table 4 for derivation.

^c/ Computed as 2 acre-feet or 10 percent of Adjudicated Right [Column (1)] whichever is larger.

^d/ In violation of Judgment.

Of the ten parties overextracting ground water, only two exceeded the limit imposed by the Judgment. In both cases, the parties are farmers having a zero water right. The two parties have no supplementary water source and must meet their water demands by purchasing Exchange Pool water each year.

In view of the difficulty of estimating water needs one year in advance for this type of water requirement and since sufficient Exchange Pool water has been purchased during the 1969-70 water year by both parties in question, the Watermaster recommends no court action in this instance.



CHAPTER V. ADMINISTRATIVE COSTS

Expenses incurred in administering watermaster service areas are payable one-half by the State and one-half by the parties. To obtain the funds required for watermaster service, the Watermaster prepares a tentative budget each year stating the anticipated expense for administering the provisions of the Judgment. A copy of the tentative budget is mailed to each of the parties at least 60 days before the beginning of each water year. If no objections are received within 15 days after service of the tentative budget, it becomes the final budget.

The 1968-69 tentative budget, which was mailed on July 31, 1968, received no objections and became the final budget on August 15, 1968. The final approved budget is presented in Table 10.

TABLE 10
APPROVED BUDGET FOR 1968-69

Salaries and wages	\$24,858
Operating expenses	<u>11,812</u>
 TOTAL BUDGET	 \$36,670
 One-half payable by State	 \$18,335
One-half payable by parties	\$18,335
Less carryover from 1967-68	- <u>6,335</u>
 TOTAL AMOUNT TO BE BILLED	 \$12,000

The administrative cost chargeable to each party is in proportion to its "Adjudicated Right" and is payable on or prior to the first day of the water year. A five percent penalty is added if charges become delinquent. A total of \$60.16 was collected in penalties for delayed payments. Apportionment of the parties' share of the budget for the 1968-69 water year is set forth in Table 11.

Income and expenditures for watermaster service during the 1968-69 water year are shown in Table 12. Any credit or debit balance is carried forward into the succeeding water year. The parties' share of the 1968-69 carryover amounts to \$7,198.15.

TABLE 11

APPORTIONMENT OF PARTIES' SHARE OF 1968-69 BUDGET

Party	Adjudicated	Apportionment
	Right,	Paid
	in acre-feet	
ABC Nursery, Incorporated	20.30	\$ 3.78
American Plant Growers, Incorporated	10.00	1.86 ^a /
Associated Southern Investment Company	46.70	8.69
Atlantic Richfield Company	4,428.00	824.05
Ballman, Frank A., Estate of	7.00	1.30 ^a /
California Water Service Company	3,071.00	571.51
Carson Estate Company ^b /	130.00	24.19
Carson-Madrone Company	104.00	19.35
Chandler's Palos Verdes Sand and Gravel Corporation	294.20	54.75
Columbia Broadcasting Systems, Incorporated	18.50	2.33 ^a /
Curtis, Owen W.	0.36	0.07 ^a /
Delaney, Golda, Estate of	4.10	0.76 ^a /
Desser Enterprises	0.00	0.00
Dominguez Water Corporation	10,058.25	1,871.84
El Segundo, City of	953.00	177.35
Etchemendy, Caroline, Estate of	8.20	1.53 ^a /
Flesh, Leslie R. and Andor Pasternak, et al.	3.50	0.65 ^a /
Fletcher Oil and Refining Company	86.30	16.06
Fujimoto, Samuel R. and Raymond S.	20.00	3.72
Gillingham, Florence R., et al.	2.40	0.45 ^a /
Gonzales, Felipe and Gabriela	34.30	6.38
Grant, John, Estate of	59.00	10.98
Harris, R. and L. ^b /	0.70	0.13 ^a /
Harris Tube, Incorporated	0.70	0.13 ^a /
Hawthorne, City of	1,882.00	350.24
Hillside Memorial Park	29.20	5.43
Hollywood Turf Club	282.00	52.48
Hornstra, Wilbur ^b /	14.10	2.62 ^a /
Industrial Chemical Division - Allied Chemical Corporation	255.00	47.46
Inglewood, City of	4,383.80	815.83
Inose, Kenichi	1.90	0.35 ^a /
Ishibashi, Aki	0.00	0.00
Jenkins, Harry C.	1.80	0.33 ^a /
Johns-Manville Products Corporation	881.00	163.95
Joughin Torrance Ranch	20.25	3.77
Jungquist, Fred A.	3.70	0.69 ^a /
Lermens, Alfred	0.70	0.13 ^a /
Leuzinger, Emma L.	1.40	0.26 ^a /
Long Beach, City of	0.70	0.13 ^a /
Lopes, Frank	3.70	0.69 ^a /
Los Angeles, City of	1,503.00	279.71
Los Angeles County - Alondra Park	67.70	12.60
Los Angeles County Sanitation District No. 2	102.00	18.98
Los Angeles County Waterworks District No. 13	1,352.00	251.61
Los Angeles County Waterworks District No. 22	551.00	102.54

APPORTIONMENT OF PARTIES' SHARE OF 1968-69 BUDGET
(continued)

Party	: Adjudicated : Right, : in acre-feet	: Apportionment : Paid
Los Angeles County-Western Avenue	296.00	\$ 55.09
Golf Course		
Loyola University of Los Angeles	48.10	8.95
Manhattan Beach, City of	1,131.20	210.52
Mayflower Nurseries	0.00	0.00
McDonnell Douglas Corporation	1.70	0.32 ^a /
Mobil Oil Corporation	2,570.00	478.28
Moran, Ronald E.	6.00	1.12 ^a /
Mori, Roy H. and Kenji	5.60	1.04 ^a /
Murdock, George R.	1.37	0.25 ^a /
Northrop Corporation, Aircraft Division	38.15	7.10
Otani, Chisato	0.00	0.00
Pacific Crest Cemetery Company	39.40	7.33
Palos Verdes Begonia Farm	0.00	0.00
Palos Verdes Water Company	999.00	185.91
Park Water Company	160.00	29.78
Phillips Petroleum Company	167.00	31.08
Rehor, Josephine P.	2.20	0.41 ^a /
Rockwell, Michael L.	0.10	0.02 ^a /
Roman Catholic Archbishop	72.30	13.46
Santa Fe Land Improvement Company	39.50	7.35
Sheets, Esther M.	5.50	1.02 ^a /
Shell Oil Company	4,516.00	840.43
Shinoda Brothers, Incorporated	22.50	4.19
Southern California Edison Company	10.40	1.91 ^a /
Southern California Water Company	6,548.64	1,218.70
Southwest Steel Rolling Mills ^b /	3.40	0.63 ^a /
Spanish American Institute	44.40	8.26
Sparkletts Drinking Water Corporation	152.60	28.40
Standard Oil Company of California	4,601.30	856.30
Stauffer Chemical Company	521.00	96.96
Superior Oil Company	26.40	4.91
Texaco, Incorporated	3,432.00	638.70
Thaxter, Walter and Lois A. LeNoir ^b /	3.50	0.65 ^a /
Torrance, City of	3,795.73	706.39 ^c /
Union Nursery, Incorporated	4.70	0.87 ^a /
Union Oil Company of California	2,670.00	496.89 ^c /
United States Steel Corporation	1,791.00	333.31
Watson Land Company	42.60	7.93
Wiseburn School District	8.20	1.53 ^a /
Ziegler, Maxwell T.	<u>0.00</u>	<u>0.00</u>
TOTALS	64,468.95	\$11,972.82

^a/ Payment waived on apportionment of less than \$3.00 in accordance with Section 13943.5 of the Government Code. A total of \$24.86 was waived in this manner.

^b/ Was a party at the time of billing.

^c/ Delayed payment, penalty assessed. A total of \$60.16 was collected in penalties.

TABLE 12
STATEMENT OF 1968-69 INCOME AND EXPENDITURES

Item	Parties	State	Parties and State
<u>Income</u>			
From 1968-69 budget	\$11,973.34	\$18,335.00	\$30,308.34
Balance from water year 1966-67	8,649.84		8,649.84
From penalties	<u>60.16</u>	<u> </u>	<u>60.16</u>
TOTAL INCOME	\$20,683.34	\$18,335.00	\$39,018.34
<u>Expenditures</u>			
Salaries and wages	\$10,053.18	\$10,053.19	\$20,106.37
Operating expenses			
Miscellaneous indirect costs ^{a/}	971.97	972.01	1,943.98
Travel in State	131.50	131.52	263.02
Printing annual report	207.59	207.60	415.19
Electronic machine computing	1,234.14	1,234.14	2,468.28
other ^{b/}	<u>886.81</u>	<u>886.86</u>	<u>1,773.67</u>
TOTAL EXPENDITURES	<u>\$13,485.19</u>	<u>\$13,485.32</u>	<u>\$26,970.51</u>
BALANCE	<u>\$ 7,198.15^{c/}</u>	<u>\$ 4,849.68</u>	<u>\$12,047.83</u>

^{a/} Rent, utilities, communications, retirement, employee's health plan, and workmen's compensation insurance.

^{b/} Equipment rental, mobile equipment operation, engineering contracts.

^{c/} Total credit to parties in 1969-70 water year, subject to delayed charges.

APPENDIX A

ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969

AND

COPIES OF DOCUMENTS SUBSTANTIATING
TRANSFERS OF ADJUDICATED RIGHT

APPENDIX A
TABLE OF CONTENTS

*The 1968-69 lease was erroneously published in last year's report. This year's report will show a copy of the 1967-68 lease.

ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969

<u>Party</u>	<u>Adjudicated right, in acre-feet per year</u>
* ABC Nursery, Incorporated	
Successor to Sidney R. and Charlotte W. Title	13.60
Successor to Keith W. and Opal B. Schlaegel	6.70
Successor to Clara B. Verburg	<u>6.70</u>
	20.30
* American Plant Growers, Incorporated	
Second West Coast Basin Judgment	2.60
Successor to Ben Cluff Dairy	<u>7.40</u>
Successor to Emily and Edward Cost	<u>7.40</u>
	10.00
Associated Southern Investment Company (formerly Edison Securities Company)	46.70
Atlantic Richfield Company (formerly Richfield Oil Corporation)	4,428.00
* Ballman, Frank A. and Rosemary N.	7.00
* California Water Service Company	3,071.00
* Carson—Madrona Company	
Successor to Chanslor—Western Oil and Development Company	104.00
* Chandler's Palos Verdes Sand and Gravel Corporation	
Successor to Southwestern Portland Cement Company	15.00
Second West Coast Basin Judgment	95.20
Successor to Torrance Sand and Gravel Corporation	
Successor to Western Investment Company	<u>184.00</u>
	294.20
Coast Forest Products	
Successor to Southwest Steel Rolling Mills	
Successor to A. K. Wilson Lumber Company, a corporation	
one Martin Bros. Box Company of California	3.40
Columbia Broadcasting Systems, Incorporated	18.50
Sold to Ronald E. Moran	<u>— 9.00</u>
	9.50
Curtis, Owen W.	3.80
Sold to Southern California Water Company	<u>— 3.44</u>
	0.36
Delaney, Golda, Estate of (formerly Arthur J. Delaney)	
Successor to Bego Corporation	4.10
* Desser Enterprises	
Second West Coast Basin Judgment	0.00

ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969
(continued)

<u>Party</u>	<u>Adjudicated right, in acre-feet per year</u>
* Dominguez Water Corporation	9,477.80
Successor to Carson Estate Company	<u>130.00</u>
Successor to Don Wilson Builders	32.60
Successors to Isamu, Kazuo and Yoshiki R. Kita	121.00
Successors to Lathrop M. Ellinwood	254.00
Successor to Del Amo Estate Company	91.00
Successor to Dominguez Estate Company	19.30
Successor in part to H. J. Early	55.35
Successor to Jeanette R. Heydenbeck	6.50
formerly Jeanette R. Reifsnnyder	19.30
Successor to Helen Nakano, et al.	10,188.25
Successor to R. A. Watt, Incorporated	0.70
Successor in part to Joughin Torrance Ranch	5.50
Successor in part to Isabela J. Granz Estate	14.10
Successor to Ned Ewing, et al.	8.20
Successor in part to Isabela J. Granz Estate	3.50
* El Segundo, City of	953.00
Engel sма, Jake	14.10
Successor to Wilbur Hornstra	2.40
Etchemendy, Caroline, Estate of	34.30
Flesh, Leslie R. and Andor Pasternak, et al.	3.50
Successors to Alfred and Ruth Seaback	86.30
* Fletcher Oil and Refining Company	20.00
(formerly Fletcher Oil Company)	0.00
Fujimoto, Samuel R. and Raymond S.	2.40
Successors in part to H. J. Early	0.70
* Gillingham, Florence R., et al.	0.70
* Gonzales, Felipe and Gabriela	0.70
* Grant, John, Estate of	0.70
* Harris, R. and L.	0.70
Successor to Lawrence I. Listen	<u>0.70</u>
Disclaimed water right	<u>0.70</u>
* Harris Tube, Incorporated	0.00
Successor in part to B. Robinson and Associates	0.70
Successors to James K. Lawler's Estate	0.70
Hawthorne, City of	1,882.00
* Hillside Memorial Park	16.70
Successor to Sigmund S. and Lionel S. Hockwalk	<u>12.50</u>
Successors to W. J. Frogge	29.20
* Hollywood Turf Club	282.00

ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969
(continued)

<u>Party</u>	<u>Adjudicated right, in acre-feet per year</u>
*Industrial Chemical Division, Allied Chemical Corp. (formerly Allied Chemical Corporation, General Chemical Division)	255.00
*Inglewood, City of Successor to Frank Abell	4,382.00 1.80 <hr style="width: 20%; margin-left: 0; border: 0.5px solid black;"/> 4,383.80
*Inose, Kenichi Successor to Donald G. Hunt Successor to Fred Scander and George Nasin Successor to Thaxter, Walter and Lois A. LeNoir	1.90 3.50 <hr style="width: 20%; margin-left: 0; border: 0.5px solid black;"/> 5.40
*Ishibashi, Aki Successor to Alice M. Ueda, listed in Second West Coast Basin Judgment	0.00
Jenkins, Harry C. Successor to H. L. Perry Successor to Mrs. Zoraida Parke	1.80
*Johns-Manville Products Corporation	881.00
Joughin Torrance Ranch Successors in part to Isabella J. Granz Estate Sold to Normandie Park Sold to R. A. Watt, Incorporated Long-term lease to: Standard Oil Company of California Superior Oil Company	274.55 -176.84 - 55.35 - 15.32 - 6.79 <hr style="width: 20%; margin-left: 0; border: 0.5px solid black;"/> 20.25
Jungquist, Fred A. (formerly Katherine P. Woodman Jungquist)	3.70
*Lermens, Alfred	0.70
Leuzinger, Emma L.	1.40
Long Beach, City of	0.70
Lopes, Frank	3.70
Los Angeles, City of	1,503.00
*Los Angeles County-Alondra Park Successor to Los Angeles County Flood Control District Successor in part to A. H. Smith and Sam Serber, et al.	28.70 37.60 1.40 <hr style="width: 20%; margin-left: 0; border: 0.5px solid black;"/> 67.70
*Los Angeles County Sanitation District No. 2	102.00
*Los Angeles County Waterworks District No. 13	1,352.00
*Los Angeles County Waterworks District No. 22	551.00

ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969
(continued)

<u>Party</u>	<u>Adjudicated right, in acre-feet per year</u>
*Los Angeles County—Western Avenue Golf Course Second West Coast Basin Judgment listed as Board of Retirement of the Los Angeles County Employees Retirement System	296.00
*Loyola University of Los Angeles	48.10
*Manhattan Beach, City of	1,131.20
*Mayflower Nurseries (formerly Herbert Sakaye Fukuwa)	0.00
McDonnell Douglas Corporation (formerly Douglas Aircraft Company, Incorporated) Lease from United States Navy Department Successor to Aluminum Company of America	1.70
Mobil Oil Corporation (formerly Socony Mobil Oil Company)	2,570.00
Moran, Ronald E. Successor in part to Columbia Broadcasting System, Incorporated	9.00
*Mori, Roy H. and Kenji Second West Coast Basin Judgment	5.60
Murdock, George R. Successor in part to Isabela J. Granz Estate Long-term lease to: Standard Oil Company of California Superior Oil Company	$ \begin{array}{r} 1.77 \\ - 0.28 \\ \hline - 0.12 \\ \hline 1.37 \end{array} $
Norair, A Division of Northrop Corporation (formerly known as Northrop Aircraft, Inc.)	38.15
*Otani, Chisato	0.00
Pacific Crest Cemetery Company Successor to H. S. Scott Successor to W. F. Burke Successor to Wada, Kaoru and Satoru Successor to C. F. Johnson	$ \begin{array}{r} 17.70 \\ 9.50 \\ \hline 12.20 \\ \hline 39.40 \end{array} $
*Palos Verdes Begonia Farm Successor to Gus A. Bauman	0.00
*Palos Verdes Water Company	999.00
*Park Water Company	160.00
*Phillips Petroleum Company (formerly Tidewater Oil Company)	167.00
Rehor, Josephine P.	2.20

ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969
(continued)

<u>Party</u>	<u>Adjudicated right, in acre-feet per year</u>
Rockwell, Michael L. Successor to Bank Of America National Trust and Savings Association, Trust Department B151	0.10
*Roman Catholic Archbishop of Los Angeles (Holy Cross Cemetery)	72.30
*Santa Fe Land Improvement Company	39.50
* Sheets, Esther M.	5.50
* Shell Oil Company	4,516.00
*Shinoda Brothers, Incorporated Second West Coast Basin Judgment	22.50
*Southern California Edison Company	10.40
Southern California Water Company Successor in part to B. Robinson and Associates Successor to James K. Lawler's Estate	6,265.30 2.40
Successor in part to Owen W. Curtis	3.44
Successor to C. F. and W. S. Rosencrans listed as Carmelita Rosencrans Ewing	91.30
Successor to Ryan Aeronautical Company	20.20
Successor to Southern Pacific Company	<u>166.00</u>
	6,548.64
Spanish American Institute	44.40
Sparkletts Drinking Water Corporation Successor to Rembert C. Anderson, et al. Successor to State of California Successor to: Robert L. Fullilove Kelly Pipe Company (part only)	80.50 1.00 16.30
Joe and Rose Moniz	2.20
Flavio Rodriguez (part only)	4.00
Sam Serber and Freda Smith, et al. (part only)	2.60
Successor to Kahler, et al Successors in part to Kelly Pipe Company	18.90 13.80
Successor in part to Kelly Pipe Company	3.50
Successor to Gladys Kurtz	6.70
Successor to James McCandless	3.10
Successor to Wechsler, B.A. Successor to Mates Tune, et al. Successors to Josephine Watkinson	152.60
*Standard Oil Company of California Long-term lease from: Isabela J. Granz Estate Joughin Torrance Ranch George R. Murdoch	4,541.70 16.26 43.06 0.28
	4,601.30

**ADJUDICATED RIGHT OF WEST COAST BASIN PARTIES
SEPTEMBER 1969
(continued)**

<u>Party</u>	<u>Adjudicated right, in acre-feet per year</u>
* Stauffer Chemical Company	521.00
Superior Oil Company	0.00
Long-term lease from: Isabela J. Granz Estate	7.21
Joughin Torrance Ranch	19.07
George R. Murdock	0.12
	26.40
Texaco, Incorporated	3,432.00
* Torrance, City of	2,519.00
Successor to Alcast Foundry, et al.	
Successor to Chas. L. Draper, et al.	7.20
Successor to Richard Barclay and R. A. Watt	
Successor to Isabela J. Granz Estate	59.96
Successor to Belvidere Mutual Water Company	33.40
Successor to Anna Mae Jones	50.20
Successor to Moneta Water Company	916.00
Successor to Normandie Park	
Successor to Isabela J. Granz Estate	136.82
Successor to Torrance Unified School District	
Successor to Hilario S. and Emma Alwag	
Successors to T. C. Navarro	53.90
Successor to Peggy Swick	5.50
Successor to R. A. Watt, Incorporated	
Successor to Isabela J. Granz Estate	13.75
	3,795.73
* Union Nursery, Incorporated	
Second West Coast Basin Judgment	4.70
* Union Oil Company of California	2,670.00
* United States Steel Corporation	1,791.00
Watson Land Company	42.60
* Wiseburn School District	8.20
* Ziegler, Maxwell T.	
(Lease to Ascot Attractions)	0.00
TOTALS	64,468.25

*Members of the "Exchange Pool" as of September 30, 1969, pursuant to paragraph VII of the Judgment.

AGREEMENT OF LEASE AND TRANSFER OF WATER RIGHTS

STANDARD OIL COMPANY OF CALIFORNIA, Western Operations, Inc.. hereinafter referred to as "Standard," hereby leases and transfers to ATLANTIC RICHFIELD COMPANY, hereinafter referred to as "Atlantic Richfield," for and during the period commencing with the date hereof and continuing to and including September 30, 1969, hereinafter referred to as "said period" water rights consisting of the right to pump fifteen hundred (1,500) acre-feet of water for and during said period from the West Coast Basin, being a ground water basin within the Central and West Basin Water Replenishment District, in the State of California.

Atlantic Richfield shall pay to Standard a rental of Twenty Dollars (\$20.00) per acre-foot for the water rights leased and transferred hereunder.

The total quantity of water which Atlantic Richfield shall be entitled to pump as a result of this lease and transfer is fifteen hundred (1,500) acre-feet and the total consideration therefore, computed on the basis of said rental of Twenty Dollars (\$20.00) per acre-foot is Thirty Thousand Dollars (\$30,000), which consideration shall be paid to Standard by Atlantic Richfield's check on or before October 30, 1969.

Atlantic Richfield shall pay all of the assessments levied by the Central and West Basin Replenishment District on all of said fifteen hundred (1,500) acre-feet of water, the rights to which are leased and transferred to Atlantic Richfield hereunder, pumped by Atlantic Richfield during said period.

Standard agrees not to pump water from said West Coast Basin during said period in a quantity which would reduce its water rights in the said West Coast Basin below said fifteen hundred (1,500) acre-feet.

Standard represents and warrants that it owns (and agrees to indemnify Atlantic Richfield against any claims by others to) said water rights leased and transferred hereunder, and that Standard has the right to pump said fifteen hundred (1,500) acre-feet of water for and during said period, and that Standard has the full right, without further authorization or approval of any governmental authority or agency, to lease and transfer to Atlantic Richfield said water rights and the right to pump said fifteen hundred (1,500) acre-feet of water during said period.

Dated this 12th day of March, 1969

STANDARD OIL COMPANY OF CALIFORNIA,
WESTERN OPERATIONS, INC.

By /s/ J. R. Grey
VICE-PRESIDENT

By _____

ATLANTIC RICHFIELD COMPANY

By /s/ L. F. Strader

By _____

AGREEMENT OF LEASE AND TRANSFER OF WATER RIGHTS

STANDARD OIL COMPANY OF CALIFORNIA, Western Operations, Inc., hereinafter referred to as "Standard," hereby leases and transfers to ATLANTIC RICHFIELD COMPANY, hereinafter referred to as "Atlantic Richfield," for and during the period commencing with the date hereof and continuing to and including September 30, 1969, hereinafter referred to as "Said period" water rights consisting of the right to pump two hundred (200) acre-feet of water for and during said period from the West Coast Basin, being a ground water basin within the Central and West Basin Water Replenishment District, in the State of California.

Atlantic Richfield shall pay to Standard a rental of Twenty Dollars (\$20) per acre-foot for the water rights leased and transferred hereunder.

The total quantity of water which Atlantic Richfield shall be entitled to pump as a result of this lease and transfer is two hundred (200) acre-feet and the total consideration therefore, computed on the basis of said rental of Twenty Dollars (\$20) per acre-foot is Four Thousand Dollars (\$4,000), which consideration shall be paid to Standard by Atlantic Richfield's check on or before October 30, 1969.

Atlantic Richfield shall pay all of the assessments levied by the Central and West Basin Replenishment District on all of said two hundred (200) acre-feet of water, the rights to which are leased and transferred to Atlantic Richfield hereunder, pumped by Atlantic Richfield during said period.

Standard agrees not to pump water from said West Coast Basin during said period in a quantity which would reduce its water rights in the said West Coast Basin below said two hundred (200) acre-feet.

Standard represents and warrants that it owns (and agrees to indemnify Atlantic Richfield against any claims by others to) said water rights leased and transferred hereunder, and that Standard has the right to pump said two hundred (200) acre-feet of water for and during said period, and that Standard has the full right, without further authorization or approval of any governmental authority or agency, to lease and transfer to Atlantic Richfield said water rights and the right to pump said two hundred (200) acre-feet of water during said period.

Dated this 26th day of August, 1969

STANDARD OIL COMPANY OF CALIFORNIA,
WESTERN OPERATIONS, INC.

By /s/ C. W. Kitto
Vice-President

By _____

ATLANTIC RICHFIELD COMPANY

By /s/ E. M. Semple
Assistant Vice President

By /s/ Nell Coker

DEED OF WATER RIGHTS

FOR VALUABLE CONSIDERATION, a receipt of which is hereby acknowledged, CARSON ESTATE COMPANY, a California corporation, hereby remises, releases, quitclaims, transfers and assigns to DOMINGUEZ WATER CORPORATION:

Any and all of its right, title and interest in and to that certain right to annually take, extract, pump, or otherwise remove 130.00 acre feet of water from the West Coast Basin, within the County of Los Angeles, State of California, which Basin is more particularly described in the Report of Referee on file in Los Angeles Superior Court Case No. 506806, entitled "California Water Service Company, et al. v. City of Compton, et al.", said right being that allocated to Carson Estate Company in the judgment on file in said action.

IN WITNESS WHEREOF, CARSON ESTATE COMPANY has caused this instrument to be duly executed on the 14th day of January, 1969.

CARSON ESTATE COMPANY

By /s/ Thomas Caldwell Cooper
President

By /s/ Edward C. Scheller
Secretary

State of California)
) ss.
County of Los Angeles)

On this 14th day of January, 1969, before me, Carol L. Figueroa, a Notary Public in and for said County and State, personally appeared Thomas Caldwell Cooper and Edward C. Scheller, known to me to be the President and Secretary of the Carson Estate Company, the corporation that executed the within Instrument, known to me to be the persons who executed the within Instrument, on behalf of the corporation therein named, and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal the day and year in this certificate first above written.

/s/ Carol L. Figueroa
Notary Public in and for said County and State

LEASE OF WATER RIGHTS

THIS LEASE, made and entered into as of the 1st day of October, 1968, by and between CARSON-MADRONA COMPANY, a partnership consisting of GUILFORD GLAZER and GREAT LAKES PROPERTIES, INC., a Delaware corporation, of 21515 Hawthorne Boulevard, Torrance, California, hereinafter referred to as "Lessor" and DOMINGUEZ WATER CORPORATION, a California corporation, of 21718 South Alameda Street, Long Beach, California, 90810, hereinafter referred to as "Lessee";

W I T N E S S E T H:

WHEREAS, Lessor is the owner of the right to annually take, produce and withdraw from the ground water basin in Los Angeles County, California, commonly known as the "West Coast Basin", approximately 10⁴ acre-feet of water per year; and

WHEREAS, Lessee desires to avail itself of the rights of Lessor within West Coast Basin during the water year ending September 30, 1969 and Lessor is willing to allow Lessee to pump Lessor's water right within West Coast Basin, in an amount of 10⁴ acre-feet, during the 1968-69 water year, ending September 30, 1969, subject to the terms and conditions hereinafter set forth;

NOW, THEREFORE, IT IS MUTUALLY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

For and in consideration of the covenants and agreement hereinafter mentioned, Lessor does hereby lease, let, hire to, and, during the term hereof, assign to Lessee for the water year October 1, 1968 through September 30, 1969, Lessor's right to withdraw from said West Coast Basin

10⁴ acre-feet of water, together with Lessor's right to devote said water to beneficial uses.

Lessee shall:

1. Pay to Lessor the sum of \$1,560.00, (being \$15.00 per acre-foot of water leased and assigned hereunder). Said sum to be payable March 1, 1969.

2. Pay directly to the Central and West Basin Water Replenishment District any and all pump assessments and any and all other charges levied on the waters produced hereunder by Lessee.

3. Pay all power costs and other production costs in connection with the production of the water referred to herein.

4. Prepare and file all necessary reports and documents in connection with the water rights leased herein, required by the Central and West Basin Water Replenishment District.

5. Make the necessary filings with the State Water Rights Board, in connection with the waters produced by Lessee hereunder, as provided in part 5 of Division 2 (Sections 4999 et seq.) of the Water Code of the State of California, as amended, and prepare and file any other reports, filings or the like as may be required, during the term hereof, from time to time by proper authority, in connection with the rights leased hereunder.

6. Prepare, file and furnish a copy to Lessor of all reports, documents and papers necessary and advisable for the preservation of Lessor's water rights hereby leased, without cost to Lessor.

All notices, bills, demands or communications from one party to the other hereunder shall be in writing, and shall be deemed sufficiently served, given or made, by depositing the same in the United States mail in

any branch or main post office, in the State of California, postage prepaid, addressed to the respective party at the address hereinabove and recitals hereof set forth or at such other address either party hereto may specify by written notice given to the other.

This Lease, and all of the rights and obligations herein contained, shall bind and inure to the benefit of the respective successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed in duplicate, each of which shall be deemed an original, by their respective officers, duly authorized and their corporate seals to be hereunto affixed, at Los Angeles, California, as of the day and year first above mentioned.

CARSON-MADRONA COMPANY
a partnership

By /s/ Guilford Glazer
Guilford Glazer, partner
By
Attorney of Fact

Great Lakes Properties, Inc., partner

By /s/ D. L. Marlette

(CORPORATE SEAL)

By /s/ Sheldon L. Spelman

DOMINGUEZ WATER CORPORATION

By /s/ C. M. Brewer
President

(CORPORATE SEAL)

By /s/ Alex Lawrence
Secretary

LEASE OF WATER RIGHTS

THIS LEASE, made and entered into as of the 28th day of September, 1967, by and between LOYOLA UNIVERSITY OF LOS ANGELES, a corporation, of 7101 West 80th Street, Los Angeles, California, hereinafter referred to as "Lessor" and DOMINGUEZ WATER CORPORATION, a California corporation, of 21718 South Alameda Street, Long Beach, California 90810, hereinafter referred to as "Lessee";

W I T N E S S E T H:

WHEREAS, Lessor is the owner of the right to annually take, produce and withdraw from the ground water basin in Los Angeles County, California, commonly known as the "West Coast Basin", approximately 48.10 acre feet of water per year; and

WHEREAS, Lessee desires to avail itself of the rights of Lessor within West Coast Basin during the water year ending September 30, 1968 and Lessor is willing to allow Lessee to pump Lessor's water right within West Coast Basin, in an amount of 48.10 acre feet, during the 1967-68 water year, ending September 30, 1968, subject to the terms and conditions hereinafter set forth;

NOW, THEREFORE, IT IS MUTUALLY AGREED BY AND BETWEEN THE PARTIES HERETO AS FOLLOWS:

For and in consideration of the covenants and agreements hereinafter mentioned, Lessor does hereby lease, let, hire to, and, during the term hereof assign to Lessee for the water year October 1, 1967 through September 30, 1968, Lessor's right to withdraw from said West Coast Basin 48.10 acre feet of water, together with Lessor's right to devote said water to beneficial uses.

Lessee shall:

1. Pay to Lessor the sum of \$721.50. Said sum to be payable upon execution of the lease.
2. Pay directly to the Central and West Basin Water Replenishment District any and all pump assessments and any and all other charges levied on the waters produced hereunder by Lessee.
3. Pay all power costs and other production costs in connection with the production of the water referred to herein.
4. Prepare and file all necessary reports and documents in connection with the water rights leased herein, required by the Central and West Basin Water Replenishment District.
5. Make the necessary filings with the State Water Rights Board, in connection with the waters produced by Lessee hereunder, as provided in part 5 of Division 2 (Sections 4999 et seq.) of the Water Code of the State of California, as amended, and prepare and file any other reports, filings or the like as may be required, during the term hereof, from time to time by proper authority, in connection with the rights leased hereunder.
6. Prepare, file and furnish a copy to Lessor of all reports, documents and papers necessary and advisable for the preservation of Lessor's water rights hereby leased, without cost to Lessor.

All notices, bills, demands, or communications from one party to the other hereunder shall be in writing, and shall be deemed sufficiently served, given or made by depositing the same in the United States mail in any main or branch post office, in the State of California, postage prepaid, addressed to the respective party at the address hereinabove and recitals hereof set forth or at such other address either party hereto may specify by written notice

given to the other.

This Lease, and all of the rights and obligations herein contained, shall bind and inure to the benefit of the respective successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have caused this Lease to be executed in duplicate, each of which shall be deemed an original, by their respective officers, duly authorized and their corporate seals to be hereunto affixed, at Los Angeles, California, as of the day and year first above mentioned.

LOYOLA UNIVERSITY OF LOS ANGELES

By /s/ Charles Casassa
President

(Corporate Seal)

By /s/ Thomas D. Terry
Secretary

DOMINGUEZ WATER CORPORATION

By /s/ J. P. Bradley
President

(Corporate Seal)

By /s/ Alex Lawrence
Secretary

WATER RIGHT LICENSE AND AGREEMENT

FOR A VALUABLE CONSIDERATION, THE SANTA FE LAND IMPROVEMENT CO. hereby grants to DOMINGUEZ WATER CORPORATION, a license to extract 39.50 acre-feet of licensor's Adjudicated Right allocated to licensor (or predecessors in interest) under and pursuant to Judgment dated August 18, 1961 and entered in Los Angeles Superior Court Case No. 506806 entitled "California Water Service Company, et al. vs. City of Compton, et al." during the period commencing October 1, 1968 and continuing to and including September 30, 1969.

Said License is granted, subject to the following conditions:

(1) Licensee shall exercise said right and extract the same on behalf of Santa Fe Land Improvement Co. during the period above specified and put the same to beneficial use and licensee shall not by the exercise hereunder of said right acquire any right to extract water independent of the rights of licensor.

(2) Licensee shall pay assessments levied on the pumping of said ground waters by the Central and West Basin Water Replenishment District.

(3) Licensee shall notify the District and the Watermaster that said pumping was done pursuant to this license and provide the Watermaster with a copy of this document.

(4) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this license.

SANTA FE LAND IMPROVEMENT CO. warrants that it has 39.50 acre-feet of Adjudicated Right and that it has not pumped and will not pump or permit or license any other person to pump any part of said 39.50 acre-feet during period of Oct. 1st, 1968 through September 30, 1969.

DATED 22 July, 1968

SANTA FE LAND IMPROVEMENT CO.

By J. G. Starkey
Vice Pres.

DOMINGUEZ WATER CO.

By J. P. Bradley
Pres.

LEASE OF WATER RIGHTS

THIS LEASE is entered into the 2 day of September, 1969, by and between UNITED STATES STEEL CORPORATION, a Delaware corporation, hereinafter "UNITED STATES STEEL," and DOMINGUEZ WATER CORPORATION, a California corporation, hereinafter "DOMINGUEZ".

For and in consideration of the mutual undertakings and obligations of the parties as hereafter set forth, and for other valuable consideration, the parties hereto agree as follows:

1. UNITED STATES STEEL has been adjudicated a right to produce, extract and withdraw 1791 acre feet of water per annum from the West Coast Basin, as said basin is described in the Judgment in Los Angeles Superior Court Case No. 506806 entitled "California Water Service Company, et al. v. City of Compton, et al".

2. UNITED STATES STEEL HEREBY leases to DOMINGUEZ and DOMINGUEZ hereby accepts from UNITED STATES STEEL a portion of said adjudicated right to the extent of 450 acre feet.

3. The term of this lease shall commence on the date of this lease and continue to and including September 30, 1969.

4. DOMINGUEZ shall pay to UNITED STATES STEEL the sum of \$6,750.00 on or before September 30, 1969.

5. DOMINGUEZ shall pay, before delinquency, all pumping assessments levied by the Central and West Basin Water Replenishment District on UNITED STATES STEEL's said 450 acre feet of water right.

6. DOMINGUEZ shall exercise all of the rights leased hereunder and shall pump the same on behalf of UNITED STATES STEEL and shall put the same to beneficial use on or before September 30, 1969.

7. The last 450 acre feet of water extracted by DOMINGUEZ from said West Coast Basin during the water year ending September 30, 1969, shall be deemed to be pursuant to and in exercise of the rights leased hereby; and if for any reason said last 450 acre feet of water cannot be considered or deemed to have been extracted pursuant to and in exercise of the rights leased hereby, then any 450 acre feet of water extracted by DOMINGUEZ between the date hereof and September 30, 1969, shall be deemed to be pursuant to and in exercise of the rights leased hereby.

ATTEST:

UNITED STATES STEEL CORPORATION

/s/ A. F. King, Jr.
Assistant Secretary

By /s/ Robert A. McClure
Vice President

DOMINGUEZ WATER CORPORATION

By /s/ C. M. Brewer
President

By /s/ Alex Lawrence
Secretary

COPY

COPY

878 Normandie Ave., Co.
17430 South Prairie Avenue
Torrance, California

RAY E. LEE, County Recorder

same as above

GRANT DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

JAKE ENGELSMA and SUSAN ENGELSMA, Husband and wife, hereby GRANT(S) to 878 NORMANDIE AVE. CO., a General Partnership,

The following described real property in the City of Gardena
County of Los Angeles State of California

(per legal description attached hereto marked Exhibit "A" and made a part hereof)

Subject to covenants, conditions, restrictions, reservations, rights, rights of way and easements of record.

Dated August 29, 1968

/s/ Jake Engelsma
Jake Engelsma

/s/ Pauline Bergeron
Pauline Bergeron

/s/ Susan Engelsma
Susan Engelsma

That portion of Lot 6 of Subdivision of part of the Rancho San Pedro, in the City of Gardena, in the County of Los Angeles, State of California, as per map recorded in book 59 page 15 of Miscellaneous Records in the office of the county recorder of said county, described as follows:

Beginning at the intersection of the southwesterly line of said Lot 6 with the easterly line of Normandie Avenue, 60 feet wide as shown on County Surveyor's Map No. 8964, Sheet 1; thence South 55° 10' 30" East, 590.42 feet to the westerly line of the southerly prolongation thereof of the land described in the deed to Asa P. Wolverton, recorded in book 1307 page 223 of Deeds; thence along said westerly line, North 1°28' West 1110.78 feet, more or less, to the southeasterly corner of the land described in the deed to J. H. Stevens and wife, recorded in book 2838 page 5 of deeds; thence westerly along the southerly line of said last mentioned land to the intersection of said southerly line with the easterly line of said Normandie Avenue; thence southerly along said easterly line to the point of beginning.

EXCEPT that portion lying southerly of the following described line:

Beginning at a point in the westerly line of Tract No. 1909 as shown on map recorded in book 22 pages 50 and 51 of Maps, in said office, distant along said westerly line, North 01° 42' 05" East 176.91 feet from the northwest corner of Parcel 2 of that certain land conveyed to the State of California by deed recorded in book 51252 page 422 of said Official Records; thence South 60° 51' 59" East 15.12 feet; thence North 88° 12' 05" East 683.73 feet.

EXCEPT one-half of all oil, gas and/or other hydrocarbon substances or other mineral deposits upon or under said land, as reserved in Deed from Marko Guho, et al recorded in Book 18782, page 374, Official Records;

ALSO EXCEPTING and reserving to the grantors herein, their heirs, administrators, successors and assigns, the other one-half of all oil, gas and/or other hydrocarbon substances or other mineral deposits upon or under said land, without the right of surface entry above 500 feet below the surface of said land, but with the right of entry below 500 feet below the surface of said land;

ALSO EXCEPTING and reserving to the grantor herein, Lot 67 of Tract No. 29477 in the City of Gardena, County of Los Angeles, State of California, as per map recorded in Book 777 pages 12 and 73 of Maps, in the office the County Recorder of said County.

ALSO EXCEPTING and reserving to the grantors all water under said land and all water rights connected with or appertaining to said land, including all "Allowed Pumping Allocation" heretofore allocated to grantors or allocated for said land under and pursuant to judgment dated AUGUST 22, 1961 and entered in Los Angeles Superior Court Case No. 506806. Provided, however, that such reserved water rights shall not be exercised by means of any entry upon the surface of, in, under or across said hereinbefore described property and the subsurface thereof to a depth of five-hundred feet measured in a vertical direction from the earth's surface of said land.

EXHIBIT "A"

When Recorded, Please Mail
This Instrument to:

JAMES K. NARUSE
Attorney At Law
P. O. Box 2072
Gardena, California 90247

DOCUMENTARY TRANSFER TAX \$0.55

Space Above for Recorder's Use Only

DEED OF WATER RIGHTS

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, LOIS LE NOIR and WALTER THAXTER hereby grants, bargains, sells, conveys, transfers and assigns to KENICHI INOSE:

The right to Annually take, extract, pump or otherwise remove 3.50 acre feet of water from the West Coast Basin within the County of Los Angeles, State of California, which Basin is more particularly described in the Report of Referee on file in Los Angeles Superior Court Case No. 506806, entitled "California Water Service Company, et al -vs- City of Compton, et al." Said right being the right allocated to the predecessors in interest of the Grantor in the judgment on file in said action.

IN WITNESS WHEREOF, the transferrors have caused this instrument to be duly executed on the 4 day of November, 1968.

/s/ Los Le Noir
LOIS LE NOIR

/s/ Walter Thaxter
WALTER THAXTER

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

On November 4, 1968, before me, a notary public, personally appeared Lois Le Noir and Walter Thaxter, known to me to be the persons whose names are subscribed to the within instrument and acknowledged that they executed the same.

/s/ Grace Dragotto
Notary Public in and for Said
County and State

COPY

COPY

STANDARD OIL COMPANY OF CALIFORNIA,
WESTERN OPERATIONS, INC.
P.O. Box 97 El Segundo California 90245

Manufacturing Department
El Segundo Refinery
C. W. Kitto
General Manager
E. H. Oakley
Manager of Operations

October 1, 1968

Lease of Water Rights
to Mobil Oil Corporation

Mr. E. P. Hardin
Mobil Oil Corporation
3700 West 190th Street
Torrance, California 90503

Dear Mr. Hardin:

This confirms our discussion today that the water lease
between Standard Oil Company of California and Mobil Oil
Corporation, dated September 26, 1967, is extended without
change on a thirty-day cancellation basis.

Our proposal for a revised contract should be available
within the next two months.

Very truly yours,

/s/ C. W. Kitto

CWK/do

LEASE OF WATER RIGHTS

THIS AGREEMENT is entered into this 24th day of February, 1969, be and between STANDARD OIL COMPANY OF CALIFORNIA, WESTERN OPERATION, INC., (a division of Standard Oil Company of California, a Delaware Corporation), hereinafter referred to as "STANDARD" and MOBIL OIL CORPORATION, hereinafter referred to as "MOBIL".

For and in consideration of the mutual undertakings and obligations of the parties as hereinafter set out and for other valuable consideration, the parties hereto agree as follows:

1. Standard hereby leases to Mobil and Mobil takes from Standard the right to exercise Standard's appropriative, prescriptive and adjudicated right to extract water from the West Coast Basin (the ground water basin within the Central and West Basin Water Replenishment District in the State of California) to the extent of one thousand five hundred (1500) acre feet.
2. The term of this lease shall be for the year commencing February 1, 1969 and continuing to and including January 31, 1970.
3. Mobil shall pay to Standard, by check, on or before January 31, 1970, the sum of Thirty Thousand and No/100 Dollars (\$30,000.00), which sum represents twenty and No/100 Dollars (\$20.00) per acre foot.
4. Mobil shall pay, before delinquency, all pumping assessments levied by the Central and West Basin Water Replenishment District on Standard's said one thousand five hundred (1500) acre feet of water right.
5. Standard has been adjudicated to own at least one thousand five hundred (1500) acre feet of water in the case entitled CALIFORNIA WATER SERVICE COMPANY, et al v. City of Compton, et al, Los Angeles Superior Court Case No. 506, 806. However, Standard expressly makes no warranty that it is the owner of or has the right to lease the water rights purported to be leased hereunder. In the event, however, that it is deemed at any time during the term hereof that Standard does not own the rights leased hereunder or any part thereof, Standard shall return to Mobil any consideration paid to Standard, computed on the above prices per acre foot for any water rights which Mobil is unable to exercise because of Standard's lack of ownership in said water rights. Standard does not warrant that there is sufficient water in said West Basin so as to enable Mobil to extract the rights leased to it hereunder, but in the event that Mobil is prevented from exercising all or any portion of the rights leased hereunder due to exhaustion of said basin or intervention or prohibition by any legally constituted government authority, any consideration paid by Mobil to Standard shall be returned to Mobil upon the same basis as that stated above.

6. Mobil shall exercise all of the rights leased hereunder and shall pump the same on behalf of Standard and shall put the same to beneficial use. Mobil shall be relieved of its obligations under this paragraph to the extent that its failure to pump any of Standard's rights leased hereunder is caused by Mobil's inability to pump or use such water due to strikes, lockouts, algae growth in the water table, or any other reason which would make the water industrially unusable by Mobil, acts of God, or other acts or occasions of which Mobil has no control. Mobil shall notify Standard within a reasonable time of the existence of any of the aforementioned conditions.

7. Standard shall not pump water from said West Basin during the term of this lease in a quantity which would include any portion of the one thousand five hundred (1500) acre feet leased hereunder.

8. Mobil shall report all of its extractions made pursuant to this lease to all agencies to whom such reports must be made, or in the alternative, shall provide such information regarding its pumping to Standard so that Standard may make such reports, if any are required during the term of this lease.

9. If either party to this lease shall desire to serve a notice on the other, such notice shall be deemed to have been made if those sent to Standard are mailed to Mr. C. W. Kitto, General Manager, Standard Oil Company of California, Western Operations, Inc., 324 West El Segundo Boulevard, El Segundo, California, Attention: Mr. C. E. Barker; and all notices sent to Mobil are mailed to Mr. E. P. Hardin Attention: Mr. R. J. Niederstadt, 3700 W. 190th Street, Torrance, California, 90503. Delivery will be deemed to have been made when deposited in the United States mail, postage prepaid. Either party may, by notice in writing to the other, change such address for notices to it.

IN WITNESS WHEREOF THE parties hereto execute this agreement on the date first above written.

STANDARD OIL COMPANY OF CALIFORNIA
WESTERN OPERATIONS, INC. (a Division
of Standard Oil Company of California,
a Delaware Corporation)

By /s/ J. R. Grey
Vice-President

MOBIL OIL CORPORATION

By /s/ E. P. Hardin
Attorney in Fact

Mail Tax Statements to:

Mr. and Mrs. Ronald E. Moran
25 Pacific Coast Highway
Hermosa Beach, California

BK M2739 PC 771
Affix I.R.S. \$ Nil

DEED OF WATER RIGHTS

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, COLUMBIA BROADCASTING SYSTEM, INC., a New York corporation, hereby grants, bargains, sells, conveys, transfers and assigns to RONALD E. MORAN and ALDEEN E. MORAN, his wife.

The right to annually take, extract, pump, or otherwise remove 3.00 acre feet of water from the West Coast Basin within the County of Los Angeles, State of California, which Basin is more particularly described in the Report of Referee on file in Los Angeles Superior Court Case No. 506806, entitled "California Water Service Company, et al. v. City of Compton, et al.", said right being a portion of that allocated to Columbia Broadcasting System, Inc., in the judgment on file in said action.

IN WITNESS WHEREOF, COLUMBIA BROADCASTING SYSTEM, INC., has caused this instrument to be duly executed on the 26th day of December, 1967.

COLUMBIA BROADCASTING SYSTEM, INC.

Recorded in official records
of Los Angeles County, Calif.
for Title Insurance & Trust Co.
min.
45 past 2 P.M. Dec. 28, 1967

By /s/ Jack B. Purcell

(SEAL)

RAY E. LEE, County Recorder
State of California)
) ss.
County of Los Angeles)

On this 26th day of December, 1967, before me, Irene E. Hall, a Notary Public in and for said County and State, personally appeared Jack B. Purcell, known to me to be an Assistant Secretary of Columbia Broadcasting System, Inc., the corporation that executed the within Instrument, known to me to be the person who executed the within Instrument, on behalf of the corporation therein named, and he acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(SEAL)

/s/ Irene E. Hall
Notary Public in and for said
County and State
Irene E. Hall
My Commission Expires Feb. 14, 1969

LICENSE FOR WATER RIGHTS

This agreement is entered into this 9th day of May, 1969, by and between Southern California Edison Company, (a California corporation), and Associated Southern Investment Company, (a California corporation), hereinafter referred to as LICENSOR, and CHISATO OTANI, hereinafter referred to as LICENSEE.

For and in consideration of the mutual undertakings and obligations of the parties as hereinafter set forth and for other valuable consideration, the parties hereto agree as follows:

1. LICENSOR hereby gives to LICENSEE and LICENSEE takes from LICENSOR the right to exercise LICENSOR'S appropriative, prescriptive and adjudicated right(s) to extract water from the West Coast Basin (the ground water basin within the Central and West Basin Water Replenishment District in the State of California) to the extent of Thirty
(30) acre-feet per annum.

2. The term of this license shall be for the water year commencing October 1, 1968, and continuing to and including September 30, 1969, provided, however, that this agreement shall terminate immediately upon the expiration, cancellation or termination of the License previously granted to CHISATO OTANI, bearing Licensor's document number 222153.

3. LICENSEE shall pay, before delinquency, all pumping assessments levied by the Central and West Basin Water Replenishment District in LICENSOR'S said Thirty (30) acre-feet of water right(s).

4. LICENSEE shall comply promptly with all requirements of the Central and West Basin Water Replenishment District (including the filing of pumping reports and the obtaining of exchange pool water if necessary) and those of any public agency or authority.

5. LICENSOR has been adjudicated to own at least fifty-seven and one tenth (57.1) acre-feet of water in the case entitled "California Water Service Company, et al, vs. City of Compton, et al," Los Angeles Superior Court Case No. 506,806. However, LICENSOR expressly makes no warranty that it is the owner of or has the right to give the water rights purported to be given hereunder. LICENSOR does NOT warrant that there is sufficient water in said West Coast Basin so as to enable LICENSEE to extract the rights given to it hereunder.

6. LICENSEE shall exercise all of the rights given hereunder and shall pump the same on behalf of LICENSOR and shall put the same to beneficial use. LICENSEE shall be relieved of its obligations under this paragraph to the extent that its failure to pump any of LICENSOR'S rights given hereunder is caused by LICENSEE'S inability to pump or use such water due to strikes, lockouts, algae growth in the water table or any other reason which would make the water agriculturally or industrially unusable by LICENSEE, acts of God or other acts or occasions of which LICENSEE shall notify LICENSOR within a reasonable time of the existence of any of the aforementioned conditions.

7. LICENSOR shall not pump water from said West Coast Basin during the term of this license in a quantity which would include any portion of the Thirty (30) acre-feet given hereunder.

8. LICENSEE agrees to relinquish to LICENSOR the right to pump any of the Thirty (30) acre-feet herein licensed not pumped by the LICENSEE during the term of this License.

9. If either party to this license shall desire to serve a notice on the other, such notice shall be deemed to have been made if those sent to LICENSOR are mailed to Manager of Right of Way and Land Department, Southern California Edison Company, P. O. Box 351, Los Angeles, California 90053, Attention of Supervisor of Property Management; and all notices sent to LICENSEE are mailed to 18727 Prairie Avenue, Torrance, California. Delivery will be deemed to have been made when deposited in United States mail, postage prepaid. Either party may, by notice in writing to the other, change such address for notices to it.

IN WITNESS WHEREOF, the parties hereto execute this agreement on the date first above written.

SOUTHERN CALIFORNIA EDISON COMPANY,
a California corporation

By /s/ P. B. Peecook
Manager, Right of Way & Land Dept.

ASSOCIATED SOUTHERN INVESTMENT COMPANY
a California corporation

By /s/ G. L. Harvey
Vice President

LICENSEE

By /s/ Chisato Otani
Chisato Otani

LEASE OF WATER RIGHTS

THIS LEASE, Entered into as of October 1, 1968, by
and between FRED A. JUNGQUIST (herein called "Lessor") and
TEXACO Inc. (herein called "Lessee");

WITNESSETH:

WHEREAS, Lessor owns the prescriptive right to pump
annually 3.7 acre feet of water from a basin of ground water
in southwestern Los Angeles County known as the West Coast Basin,
which right was adjudicated and confirmed by the decision of the
California District Court of Appeal on February 17, 1964, in
California Water Service Company et al v. City of Compton et al
(1st Civil No. 21156); and

WHEREAS, Lessor and Lessee desire that Lessor's water
rights be leased to Lessee upon the terms and conditions herein
stated;

NOW, THEREFORE, it is agreed as follows:

1 - Lessor hereby leases to Lessee -- and Lessee hereby
takes and rents from Lessor -- the above recited rights owned by
Lessor on the terms and conditions herein stated.

2 - The term of this Lease shall be for the period
commencing October 1, 1968, and ending September 30, 1969.

3 - For the water rights leased to Lessee hereunder,
Lessee shall pay to Lessor \$18.00 for each acre foot.

4 - Payment of the sums due to Lessor pursuant to
Paragraph 3 above shall be made yearly in advance.

5 - The respective rights and obligations of Lessor and Lessee hereunder shall extend to and insure to the benefit of and be binding upon their respective successors in interest.

IN WITNESS WHEREOF, the parties hereto have executed this Lease as of the day and year first above written.

FRED A. JUNGQUIST

TEXACO INC.

/s/ Fred A. Jungquist

By /s/ Wallace E. Avery
Vice-President

By /s/ Sydney G. Sloan
Assistant-Secretary

WATER RIGHT LICENSE AND AGREEMENT

For a valuable consideration, COLUMBIA BROADCASTING SYSTEM, INC. hereby grants to the CITY OF TORRANCE: a license to extract 11.50 acre-feet of licensor's Adjudicated Right, including 2.00 acre-feet of allowable carryover, allocated to licensor (or predecessors in interest) under and pursuant to Judgment dated August 18, 1961, and entered in Los Angeles Superior Court Case 506806 entitled "California Water Service Company, et al. vs. City of Compton, et al:" during the period commencing October 1, 1968 and continuing to and including September 30, 1969.

Said License is granted, subject to the following conditions:

- (1) Licensee to pay licensor the sum of One Dollar (\$1.00).
- (2) Licensee shall exercise said right and extract the same on behalf COLUMBIA BROADCASTING SYSTEM, INC. during the period above specified and put the same to beneficial use and licensee shall not by the exercise hereunder of said right acquire any right to extract water independent of the rights of licensor.
- (3) Licensee shall pay assessments levied on the pumping of said ground waters by the Central and West Basin Water Replenishment District.
- (4) Licensee shall notify the District and the Watermaster that said pumping was done pursuant to this license and provide the Watermaster with a copy of this document.
- (5) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this license.

COLUMBIA BROADCASTING SYSTEM, INC. warrants that it has 11.50 acre-feet of Adjudicated Right and that it has not pumped and will not pump or permit or license any other person to pump any part of said 11.50 acre-feet during period of October 1, 1968 through September 30, 1969.

Dated: August 7, 1969

CITY OF TORRANCE

By /s/ Albert Isen
Mayor

ATTEST:

/s/ Vernon W. Coil
City Clerk

APPROVED AS TO FORM:

/s/ Patrick W. Smith
PATRICK W. SMITH
Deputy City Attorney

COLUMBIA BROADCASTING SYSTEM, INC.

By /s/ Clarence Hopper
Vice President

By /s/ E. Thayer Drake
Assistant Secretary

DEED OF WATER RIGHTS

For a valuable consideration, JOHN SMITH hereby sells and transfers to the JOHN DOE COMPANY:

The Right to extract _____ acre-feet of grantor's Adjudicated Right allocated to grantor (or predecessors in interest) under and pursuant to Judgment dated August 18, 1961 and entered in Los Angeles Superior Court Case No. 506806 entitled "California Water Service Company, et al. vs. City of Compton, et al."

Dated: _____

JOHN DOE COMPANY

JOHN SMITH

By _____

By _____

Title _____

Title _____

WATER RIGHT LICENSE AND AGREEMENT

For a valuable consideration, THE JOHN DOE COMPANY hereby grants to John Smith: a license to extract _____ acre-feet of licensor's Adjudicated Right allocated to licensor (or predecessors in interest) under and pursuant to Judgment dated August 18, 1961, and entered in Los Angeles Superior Court Case No. 506806 entitled "California Water Service Company, et al. vs. City of Compton, et al." during the period commencing October 1, 196__ and continuing to and including September 30, 196__.

Said License is granted, subject to the following conditions:

- (1) Licensee shall exercise said right and extract the same on behalf of JOHN DOE COMPANY during the period above specified and put the same to beneficial use and licensee shall not by the exercise hereunder of said right acquire any right to extract water independent of the rights of licensor.
- (2) Licensee shall pay assessments levied on the pumping of said ground waters by the Central and West Basin Water Replenishment District.
- (3) Licensee shall notify the District and the Watermaster that said pumping was done pursuant to this license and provide the Watermaster with a copy of this document.
- (4) Licensee shall note, in any recording of water production for the period of agreement, that said pumping was done pursuant to this license.

JOHN DOE COMPANY warrants that it has _____ acre-feet of Adjudicated Right and that it has not pumped and will not pump or permit or license any other person to pump any part of said _____ acre-feet during period of October 1, 196__ through September 30, 196__.

Dated: _____

JOHN DOE COMPANY

JOHN SMITH

By _____

By _____

Title _____

Title _____

COPY

COPY

R & L HARRIS

25601 Narbonne Avenue, Suite 1 Lomita, California 90717 Phone 325-6355
HARRIS HOMES

November 18, 1968

Clerk of the Superior Court
County of Los Angeles
Civil Division
Court House
Los Angeles, California 90012

Re: California Water Service Company, et al., Plaintiffs
vs.
City of Compton, et al., Defendants

Case No. 506806

Dear Sir:

R & L Harris, as successor in interest to Lawrence I. Liston, acquired an Adjudicated Right of 0.7 acre-feet, according to the Judgment entered on August 22, 1961 in the aforementioned Case.

This is to advise the Court and the Watermaster that this Adjudicated Right or any part thereof to take, withdraw, and pump ground water from the West Coast Basin in Los Angeles County is hereby forfeited and abandoned.

It is requested that I be relieved of the payment of further cost of administering the Watermaster Service provided for in the Judgment and that I be dropped from the mailing list.

Very truly yours,

R & L HARRIS, a Corporation

/s/ John R. Harris, Jr.
John R. Harris, Jr.
President

JRH/d

APPENDIX B
**GROUND WATER EXTRACTIONS AND
GROSS WATER SUPPLY**

APPENDIX B
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B-1	Ground Water Extractions	83
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TABLE 8-1
GROUND WATER EXTRACTIONS
IN ACRE-FEET

STATE WELL NUMBER	OWNERS DESIGN NATION	PRODUCTION												TOTAL	
		1968						1969							
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT		
<u>A B C NURSERY, INC</u>															
35/13W-29	5	1	2.54	1.80	1.39	0.59	0.16	0.00	0.00	3.27	2.91	4.61	4.67	3.24	25.18
<u>AMERICAN PLANT GROWERS INC</u>															
45/13W-19J065	0829M	2.00	1.97	1.83	0.19	2.00	1.10	1.46*	1.94*	1.04	1.35	1.37	3.30	19.55	
<u>ATLANTIC RICHFIELD COMPANY</u>															
45/13W-16R025	11	186.01	188.89	175.34	198.19	164.90	183.27	102.20	207.15	225.15	210.80	199.40	187.81	2229.11	
45/13W-21H025	4	4.03	0.00	0.00	0.00	34.91	63.29	79.09	82.23	76.68	73.69	76.08	66.94	554.94	
45/13W-21M055	7	100.64	94.83	88.21	79.84	84.20	80.27	67.83	82.23	60.70	60.51	58.20	66.75	954.01	
45/13W-21M065	8	39.47	102.71	109.64	111.68	64.45	121.23	133.50	113.30	109.47	108.99	110.47	120.43	1237.20	
45/13W-21J025	10	147.61	27.94	45.97	84.16	173.70	205.00	197.51	203.32	228.17	237.89	213.91	207.35	1972.82	
45/13W-22E015	5	114.06	109.48	104.59	101.09	100.33	108.52	96.64	109.82	96.89	102.28	113.86	111.88	1269.54	
45/13W-22F015	9	129.72	122.69	119.25	116.37	110.39	100.54	112.82	99.85	91.40	122.87	113.04	1349.33		
TOTALS		719.54	646.34	643.00	691.33	732.80	872.06	757.41	915.15	896.68	885.16	893.20	914.20	9560.95	
<u>CALIFORNIA WATER SERVICE COMPANY</u>															
35/14W-29F015	02001	74.07	46.47	71.66	64.88	28.14	43.27	56.71	81.93	62.07	84.35	81.75	81.75	782.05	
35/14W-29J015	02201	91.05	101.29	45.15	80.79	41.29	12.66	74.64	106.35	108.70	106.90	80.33	79.13	982.87	
35/14W-32A015	00401	30.22	28.66	29.35	27.45	25.29	27.48	26.98	26.83	24.35	23.78	22.92	22.71*	316.02	
45/14W-16F015	02501	14.53	21.88	1.31	16.93	18.89	6.85	15.26	17.37	15.18	21.50	15.64	18.98	190.32	
45/14W-17H025	2102	4.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91	
TOTALS		214.78	198.29	153.47	190.05	113.61	40.26	173.59	232.48	210.30	236.53	200.64	202.57	2219.57	
<u>CARSON ESTATE COMPANY</u>															
45/13W-11K035	TOY 2	4.76	6.43	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	17.99	
<u>CHANDLERS PALOS VERDES SANU-GR CORP</u>															
45/14W-27N015	TURR2	1.86	4.25	5.81	1.85	2.59	2.26	2.39	2.72	4.75	1.42	2.94	5.05	37.89	
45/14W-28J015	TORRI	8.62	1.39	0.95	0.44	5.24	8.38	9.24	8.75	8.18	3.84	9.88	6.77	71.68	
45/14W-34K015	RANCH	8.39	0.94	0.70	0.22	0.01	0.01	0.12	3.45	4.15	2.20	2.17	2.36	24.72	
45/14W-35E065	S10E8	6.12	4.91	8.14	5.12	2.68	9.79	6.90	9.83	16.97	8.94	12.71	1.92	94.03	
45/14W-35F025	PLANT	5.66	5.92	0.05	2.42	4.88	0.14	3.90	13.52	14.93	13.58	5.72	7.18	77.88	
TOTALS		30.65	17.41	15.65	10.05	15.38	20.58	22.55	38.27	48.98	29.98	33.42	23.28	306.20	
<u>CURTIS, OWEN W</u>															
35/13W-29D055	821KK	0.02*	0.02*	0.01*	0.00*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	
<u>DESSER ENTERPRISES</u>															
45/13W-15W015	878M	0.02*	0.02*	0.02*	0.02*	0.02*	0.00*	0.02*	0.02*	0.03*	0.00*	0.00*	0.00*	0.17	
<u>DOMINGUEZ WATER CORPORATION</u>															
45/13W-07L015	30	5.37	3.21	3.47	2.98	3.19	3.24	3.63	3.44	3.31	2.87	3.63	3.49	34.83	
	00304	0.76	0.71	1.12	0.92	0.81	0.94	0.99	0.96	0.53	1.45	0.44	1.03	10.72	
45/13W-11K035	T012	0.00	0.00	0.00	0.00	1.31	2.07	6.01	2.28	8.48	10.84	0.00	0.00	30.45	
45/13W-17H015	19	92.64	87.29	86.30	85.00	74.42	81.11	78.35	82.28	78.59	77.85	83.94	75.55	983.32	
45/13W-22K055	37	4.01	1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.45	1.13	1.11	1.11	6.27	
45/14W-100035	32	246.47	217.47	205.70	163.11	138.18	220.70	227.58	297.80	243.32	280.57	293.96	238.09	2772.85	
	33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.26*	0.00	0.00	8.26	
MP001		490.78	47.08	464.21	337.71	230.23	267.54	343.60	371.62	362.27	567.20	399.78	388.00	4705.02	
TOTALS		843.03	786.09	760.80	589.72	448.26	575.60	660.49	758.38	697.05	950.17	783.46	706.16	8559.21	
<u>FLETCHER OIL AND REFINING COMPANY</u>															
45/13W-30A055	3	6.03	14.46	4.51	5.32	5.05	6.54	1.38	7.77	8.18	10.01	7.78	5.93	84.96	
<u>FUJIMOTO, SAMUEL H AND RAYMOND S</u>															
35/13W-30A105	1	0.38	0.37	0.22	0.23	0.38	0.82	0.56	0.57	0.54	0.68	1.04	0.34	6.13	
<u>HAWTHORNE, CITY OF</u>															
35/14W-09N045	00004	22.84	23.58	20.63	18.46	8.76	19.95	12.39	12.48	14.77	14.62	13.95	10.83	193.26	
35/14W-09N055	12	24.35	15.26	87.86	105.57	61.93	81.54	92.82	113.19	112.04	115.23	115.61	100.63	126.03	
35/14W-09P015	00008	34.31	35.82	31.74	26.85	13.90	13.51	18.40	18.03	20.74	20.26	19.65	15.18	268.19	
35/14W-090035	00011	74.40	65.82	17.71	21.11	58.00	67.79	54.40	45.45	41.72	41.36	34.44	45.36	567.56	
TOTALS		154.90	140.28	157.94	172.99	142.59	182.79	178.01	189.15	189.27	191.47	183.65	172.00	2055.04	

TABLE B-1

 GROUND WATER EXTRACTIONS
 (CONTINUED)
 IN ACRE-FEET

STATE	OWNERS	PRODUCTION												TOTAL	
		WELL	DESIGN	1968	1969	1968	1969	1968	1969	1968	1969	1968	1969		
NUMBER	NATION	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT		
<u>HILLSIDE MEMORIAL PARK</u>															
25/14W-19K035		2	4.76	3.11	2.19	1.10	0.15	0.00	0.00	0.01	8.01	12.59	17.41	9.63	58.96
<u>HOLLYWOOD TURF CLUB</u>															
25/14W-34F015	OUT02	15.21	10.44	4.61	2.08	0.47	5.08	0.84	7.40	9.16	9.80	0.00	7.72	72.81	
25/14W-34L025	IN001	5.36	3.59	1.68	0.01	0.00	7.09	13.22	18.50	19.01	19.02	18.51	18.13	124.12	
TOTALS		20.57	14.03	8.29	2.09	0.47	12.17	14.06	25.90	28.17	28.82	18.51	25.85	196.93	
<u>INDUSTRIAL CHEM DIV-ALLIED CHEM CORP</u>															
35/14W-18N045	4	4.84	3.98	10.61	5.25	4.91	2.61	2.18	4.25	0.02	0.00	0.08	1.27	40.00	
35/14W-18N055	5	10.29	6.72	5.94	11.55	19.63	7.16	8.74	4.69	5.13	4.40	5.97	4.90	95.12	
TOTALS		15.13	10.70	18.55	16.80	24.54	9.77	10.92	8.94	5.15	4.40	6.05	6.17	135.12	
<u>INGLEWOOD, CITY OF</u>															
35/14W-03H015	38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.24	153.34	145.27	390.85		
35/14W-10G025	30	44.88	43.48	44.72	43.92	39.85	43.27	41.05	41.74	37.22	40.05	38.40	35.95	494.53	
25/14W-28E015	2	6.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	8.85	
25/14W-28E015	25	3.15	5.34	5.95	4.92	46.59	52.19	50.26	55.03	49.07	53.17	42.75	32.18	584.01	
25/14W-28H015	26	50.04	11.15	0.00	21.17	54.47	43.20	54.63	49.27	55.81	60.90	59.19	531.19		
25/14W-28H025	29	56.85	9.57	0.00	41.94	51.03	50.33	58.84	56.13	55.53	58.82	55.94	554.02		
25/14W-29H015	33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
25/14W-32C025	34	71.74	73.07	26.45	11.50	67.69	69.26	80.45	79.57	81.64	79.31	87.96	84.03	812.67	
25/14W-32F015	21	69.29	74.56	58.46	73.16	58.88	68.42	76.09	78.62	74.29	74.51	71.85	72.59	850.72	
25/14W-34C025	2	5.95	1.57	2.99	0.68	0.00	4.57	8.87	6.16	7.05	4.89	2.74	1.85	47.32	
TOTALS		355.12	266.53	187.47	253.30	318.60	331.23	366.11	376.01	353.71	459.23	516.76	488.00	4270.07	
<u>INOSE, KENICHI</u>															
35/13W-29C085	10	0.80	0.56	0.28	0.33	0.24	0.59	1.16	1.63	1.53	1.95	2.05	1.76	12.08	
<u>ISHIBASHI, AKI</u>															
45/14W-24A015	0UE0A	4.19	3.78	1.00	1.05	0.00	1.55	3.74	3.96	3.10	1.09	3.65	4.24	31.35	
<u>JOHNS MANVILLE PRODUCTS CORP</u>															
45/13W-15N015	WW001	66.88*	46.03*	65.92	65.80	54.61	83.09	81.58	85.87	83.13	52.40	53.54	48.89	787.74	
<u>LOS ANGELES, CITY OF - DEPT W&P</u>															
MP001	U.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00	404.87	506.66	271.35	320.11	0.00	1503.31	
<u>LOS ANGELES COUNTY ALONDRA PARK</u>															
35/14W-27C015	761	25.92	21.89	25.59	8.42	15.71	14.90	56.04	63.02	71.47	77.36	78.16	69.37	527.85	
<u>LOS ANGELES COUNTY SANIT DIST NO 2</u>															
45/13W-30C015	819	8.52	11.42	10.48	11.39	3.79	10.81	0.95	8.36	2.92	1.41	0.33	2.48	72.86	
<u>LOS ANGELES COUNTY WWKS DIST NO 13</u>															
45/14W-35E025	2	75.16	74.07	67.67	61.98	64.49	79.76	62.97	57.83	7.30	2.07	0.00	15.18	568.48	
<u>LOS ANGELES COUNTY WWKS DIST NO 22</u>															
35/14W-17G025	2	73.28	82.34	63.61	52.75	48.63	58.47	64.38	62.86	54.23	31.78	0.00	0.00	592.33	
<u>LOS ANGELES COUNTY-WESTERN AVE GULF</u>															
35/14W-11J025	1397C	14.24	10.07	6.59	0.00	0.00	1.40	24.12	25.52*	25.52*	23.20*	31.44	21.59	183.69	
<u>MANHATTAN BEACH, CITY OF</u>															
35/14W-290035	11	0.05	0.03	0.05	0.06	0.04	0.06	0.07	0.05	0.07	0.10	0.06	0.07	0.71	
35/14W-30H025	13	0.05	0.03	0.05	0.08	0.04	0.06	0.07	0.58	0.07	0.10	1.13	14.87	32.11	
TOTALS		0.10	0.06	0.10	0.12	0.08	0.12	0.14	0.63	0.14	0.20	16.19	14.94	32.82	
<u>MAYFLOWER NURSERIES</u>															
35/14W-25K005	NORM1	0.25	0.15	0.11	0.06	0.02	0.16	0.24	0.27	0.29	0.26	0.42	0.23	2.44	
35/13W-318075	BWY2	0.13	0.18	0.18	0.18	0.17	0.14	0.05	0.19	0.30	0.30	0.31	0.30	2.43	
TOTALS		0.38	0.33	0.29	0.24	0.19	0.30	0.29	0.46	0.59	0.57	0.72	0.53	4.89	

TABLE B-1
GROUND WATER EXTRATIONS
(CONTINUED)
IN ACHE-FEET

STATE	OWNER	PRODUCTION												TOTAL		
		WELL	DESIGN	1968						1969						
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	
<u>MCDONNELL DOUGLAS CORPORATION</u>																
45/14W-01F02S	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	
45/14W-01F03S	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.02	0.04	
TOTALS		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.03	0.05	
<u>MOELL OIL CORPORATION</u>																
45/14W-03L02S	T0025	55.03	0.64	0.00	1.86	78.75	17.79	89.76	76.18	21.65	18.58	48.97	50.38	459.59		
45/14W-03L03S	T0003	20.21	110.31	104.34	105.43	2.13	114.46	23.13	130.92	77.64	80.26	44.69	71.02	903.14		
45/14W-03L04S	T0004	108.05	89.80	98.65	77.39	89.85	102.69	63.38	110.16	89.43	76.68	102.79	46.51	1057.38		
45/14W-03M01S	T0006	155.63	127.42	133.34	131.15	134.37	161.69	152.22	134.45	156.98	161.88	145.58	156.73	1630.84		
TOTALS		340.92	328.17	340.33	317.83	305.10	396.63	328.49	337.11	345.70	337.40	342.03	325.24	450.95		
<u>OTANI, CHISATO</u>																
35/14W-33R04S	OTAN3	4.07	4.40	0.97	0.35	0.00	1.71	4.50	3.74	4.55	5.77	5.35	4.68	40.09		
35/14W-34N04S	SECCO	0.00	0.00	0.00	0.57	0.00	0.56	3.03	3.18	4.50	4.17	4.47	1.11	21.59		
TOTALS		4.07	4.40	0.97	0.92	0.00	2.27	7.53	0.92	9.05	9.94	9.82	5.79	61.68		
<u>PACIFIC CREST CEMETERY COMPANY</u>																
35/14W-33E01S	743	4.46	1.09	1.23	0.09	0.05	0.07	3.42	3.60	4.29	6.64	4.30	3.85	33.09		
<u>PALOS VERDES BEGUNIA FARM</u>																
45/14W-21N01S	1	0.30*	0.01*	0.08*	0.07*	0.04*	0.18*	0.22*	0.33*	0.27*	0.29*	0.33*	0.22*	2.34		
<u>PARK WATER COMPANY</u>																
35/14W-22K01S	15C	22.48	23.80	17.18	22.22	13.01	17.07	21.33	34.99	26.80	31.64	41.66	25.35	298.19		
35/14W-22K01S	15B	0.00	0.01	0.02	0.01	0.01	0.01	0.18	0.03	0.10	0.15	0.37	0.01	0.00		
35/14W-22R02S	15A	0.00	0.00	0.00	0.02	0.02	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.05		
TOTALS		22.48	23.87	17.20	22.25	13.64	17.08	21.52	35.02	26.90	31.79	42.03	25.36	299.14		
<u>ROMAN CATHOLIC ARCHBISHOP OF LA</u>																
25/14W-18001S	HOLYX	1.69	2.44	2.54	1.41	0.81	3.82	9.01	13.70	18.82	23.98	17.84	14.43	116.49		
<u>SHEETS, ESTHER M</u>																
35/13W-32E02S	823F	0.07	0.06	0.10	0.05	0.03	0.05	0.08	0.12	0.08	0.12	0.19	0.11	1.06		
<u>SHELL OIL COMPANY</u>																
45/13W-09A01S	0003	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21		
45/13W-09H02S	0005	300.55	291.00	300.92	297.05	273.14	263.84	251.00	270.66	264.90	295.13	287.11	263.93	3559.28		
45/13W-10E03S	0004	71.71	71.24	33.23	25.00	33.51	5.99	0.00	0.00	0.00	0.00	40.13	39.60	320.41		
45/13W-21R01S	W1001	88.81	82.83	89.48	90.28	87.25	100.63	89.93	95.32	102.39	93.71	89.20	78.39	1088.22		
45/13W-21R02S	W1003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36.73	0.00	36.73		
TOTALS		461.07	445.13	423.84	412.33	393.90	370.46	341.03	365.98	367.19	388.84	453.16	381.92	4804.85		
<u>SHINODA BROS INC</u>																
35/14W-35M07S	NEW	1.34	1.34	1.07	0.77	1.03	1.64	2.03	1.60	1.38	1.68	1.85	1.76	17.54		
<u>SOUTHERN CALIFORNIA E101UN COMPANY</u>																
35/14W-34B02S	FRESA	0.21	0.09	0.12	0.01	0.00	0.01	0.05	0.48	0.39	0.22	0.19	0.47	2.24		
45/13W-14A07S	ULNLY	0.12	0.15	0.12	0.09	0.08	0.18	0.47	0.36	0.31	0.63	0.43	0.47	3.41		
45/13W-27A02S	HANSN	0.11	0.17	0.09	0.19	0.17	0.09	0.13	0.07	0.03	0.05	0.05	0.04	1.19		
TOTALS		0.44	0.41	0.33	0.29	0.25	0.28	0.65	0.91	0.73	0.90	0.67	0.98	6.84		
<u>SOUTHERN CALIFORNIA WATER COMPANY</u>																
35/14W-03K01S	YU001	54.08	54.45	51.22	37.20	47.76	51.57	52.51	43.81	54.85	61.66	61.01	58.31	526.43		
35/14W-03K02S	YU002	35.96	38.02	39.02	30.22	39.24	45.39	48.21	46.75	44.64	47.23	47.63	62.15	524.48		
35/14W-03K03S	YU003	31.23	28.26	28.65	20.01	24.32	26.79	27.65	24.00	26.68	26.54	23.23	26.16	313.57		
35/14W-04N01S	TR001	28.51	36.80	32.02	15.30	0.08	29.41	33.54	33.83	50.69	52.52	50.16	64.13	67.08		
35/14W-04N02S	TR002	1.34	0.00	0.00	0.00	0.00	8.66	11.15	2.58	0.07	1.12	0.00	0.08	25.00		
35/14W-11G02S	W1001	40.79	46.20	59.15	59.06	53.15	22.55	22.66	67.94	65.65	64.11	63.62	63.67	628.55		
35/14W-13B02S	BA003	22.35	38.58	63.06	25.32	0.00	0.00	4.08	70.53	64.33	64.54	82.01	95.11	573.91		
35/14W-13J03S	SO003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.55	24.94	20.97	20.06	85.98		
35/14W-13J04S	SO004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	15.36	24.42	33.49	27.19	101.54		
35/14W-14D01S	SO005	0.09	5.19	0.00	0.00	0.00	1.42	0.00	0.00	12.39	15.72	17.37	52.18	52.18		
35/14W-14D02S	00109	23.04	41.12	37.75	74.00	65.52	71.51	61.17	94.13	94.80	107.07	101.64	99.52	908.96		
35/14W-21H01S	CH001	0.00	11.49	32.17	33.40	34.00	30.00	59.52	60.43	17.89	4.50	313.91				
35/14W-22A01S	CN001	55.08	33.57	13.12	15.62	15.10	20.89	28.02	25.76	35.99	44.67	53.97	305.55			
35/14W-22A02S	CN002	54.85	19.45	5.12	4.00	0.14	3.21	5.76	1.72	15.92	23.51	24.02	181.97			
35/14W-22L01S	CO001	0.11	42.36	73.33	54.52	48.30	70.50	52.28	95.94	95.34	81.99	84.43	92.41	773.31		
35/14W-25P04S	OA001	25.56	33.75	41.50	39.89	38.16	42.54	38.81	57.24	56.16	52.66	56.93	536.16			
TOTALS		374.99	428.68	512.11	405.15	393.60	410.45	454.78	634.66	709.94	756.50	720.84	772.53	657.95		

TABLE 8-1
GROUND WATER EXTRactions
(CONTINUED)
IN ACRE-FeET

STATE	OWNERS	PRODUCTION												TOTAL
		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	
<u>SPANISH AMERICAN INSTITUTE</u>														
3S/13W-190035	0811F	0.47	2.08	0.85	0.70	0.44	0.55	0.94	1.69	1.04	2.14	1.89	1.57	14.96
<u>SPARKLETT'S DRINKING WATER CAMP</u>														
3S/13W-290005	1	2.31	1.86	2.20	2.23	2.39	2.15	3.14	3.15	3.45	3.10	3.98	2.88	32.84
3S/13W-290075	2	2.84	2.14	2.18	2.44	2.41	2.44	3.39	3.28	3.59	3.76	3.57	4.46	36.50
TOTALS		5.15	4.00	4.38	4.67	4.80	4.59	6.53	6.43	7.04	6.86	7.55	7.34	69.34
<u>STANDARD OIL COMPANY OF CALIFORNIA</u>														
3S/14W-07K045	EH030	34.79	21.44	27.60	26.47	23.28	12.08	19.18	18.40	17.70	22.11	23.15	22.17	268.37
3S/14W-07K055	ER033	26.96	20.25	30.05	28.93	23.69	28.89	29.75	30.29	33.32	0.00	0.00	0.00	246.13
3S/14W-07K065	ER034	0.00	0.00	34.32	82.20	72.70	71.26	70.59	74.18	69.82	69.76	71.79	67.65	684.27
3S/14W-070065	ER032	51.40	45.32	42.25	40.55	31.39	33.90	35.07	35.98	32.40	31.54	30.31	29.31	439.42
TOTALS		109.15	87.01	134.22	178.15	151.06	146.13	154.59	158.85	153.24	123.41	125.25	119.13	1640.19
<u>STAUFFEN CHEMICAL COMPANY</u>														
4S/13W-10F025	00001	34.84	29.76	0.97	3.24	22.08	26.85	26.47	30.45	19.25	0.00	0.00	0.00	193.91
4S/13W-22F025	HA001	3.91	3.23	3.76	10.44	9.99	10.46	7.62	7.44	7.83	8.62	8.79	15.57	97.66
TOTALS		38.75	32.99	4.73	13.68	32.07	37.31	34.09	37.89	27.08	8.62	8.79	15.57	291.57
<u>TEXACO INCORPORATED</u>														
4S/13W-27M015	3	0.00	56.40	201.75	215.95	215.22	222.43	217.58	240.60	227.10	222.54	179.22	179.38	2170.17
4S/13W-27M035	5	0.00	85.40	70.62	107.41	130.12	135.88	148.23	174.93	166.19	193.34	195.49	1407.61	845.52
4S/13W-27M045	6	75.34	84.83	79.79	83.20	80.43	67.39	69.84	74.21	51.47	61.05	61.64	56.33	
TOTALS		75.34	141.23	366.94	369.77	403.06	419.94	423.30	463.04	453.50	449.78	434.20	431.20	4431.30
<u>TORRANCE, CITY OF - WATER DEPT</u>														
3S/14W-34C025	6	3.40	1.53	0.00	0.00	0.05	0.00	0.26	25.18	81.41	150.52	150.00	97.12	509.66
4S/14W-10J015	2	2.91	0.47	0.01	0.01	3.13	0.63	0.04	0.16	0.18	36.74	32.23	34.88	111.39
4S/14W-10K025	4	10.99	0.00	0.07	0.00	40.36	2.55	27.68	53.65	333.27	343.08	343.19	326.48	1481.32
4S/14W-10K035	5	24.71	14.23	0.06	0.07	19.30	17.75	32.04	172.42	216.07	271.97	298.76	298.20	1370.58
4S/14W-16L045	3	5.02	0.00	1.75	0.00	11.12	0.00	16.70	18.96	93.02	97.39	99.07	52.78	395.81
TOTALS		52.11	16.23	1.89	0.08	73.97	20.93	76.72	270.37	723.95	899.70	923.25	809.46	3868.66
<u>UNION NURSERY INC</u>														
3S/13W-29G085	831AB	1.03	1.00	0.67	0.63	0.49	0.84	1.08	1.04	0.63	1.04	1.04	0.90	10.39
<u>UNION OIL COMPANY OF CALIFORNIA</u>														
4S/13W-31P015	L4003	160.64	152.01	156.84	172.28	141.11	151.79	169.50	170.08	149.15	56.42	192.34	189.63	1862.79
SS/13W-06D015	LA002	74.35	71.99	69.13	64.67	51.06	50.38	21.32	0.00	0.00	0.00	0.00	0.00	407.90
TOTALS		239.99	225.00	225.97	236.95	192.17	202.17	190.82	170.08	149.15	56.42	192.34	189.63	2270.69
<u>UNITED STATES STEEL CORPORATION</u>														
4S/14W-11F015	4	95.75	90.17	103.16	106.46	111.87	120.35	111.87	87.19	92.06	104.76	94.85	93.54	1212.03
<u>WATSON LAND COMPANY</u>														
4S/13W-15C015	867E	3.11	0.96	3.37	0.00	0.00	0.29	1.57	1.37	1.43	2.42	2.54	0.04	17.10
<u>ZIEGLER, MAXWELL T</u>														
3S/13W-31M015	813N	2.19	1.89	0.69	0.74	0.43	0.49	2.04	3.15	3.37	3.44	3.86	2.80	25.09
GRAND TOTALS:		449d.57	4196.5b	4351.34	4209.17	4040.64	4510.48	4654.25	5871.73	6304.07	6495.05	6562.77	5943.05	61037.68

*Estimated production

TABLE B-2

GROSS WATER SUPPLY
In acre-feet

Party	Total	Purchased supply		Total supply
	ground water	Imported ^{c/}	Within basin ^{b/}	
	extractions			
ABC Nursery, Incorporated	25.18	0.00	0.00	25.18
American Plant Growers, Incorporated	19.55	0.00	0.00	19.55
Associated Southern Investment Company	0.00	0.00	0.00	0.00
Atlantic Richfield Company	9,566.95	0.00	3,472.24	13,039.19
Ballman, Frank, Estate of	0.00	0.00	<u>c/</u>	<u>c/</u>
California Water Service Company	2,219.57	10,447.30	1.20	10,448.50
Carson-Madrone Company	0.00	0.00	<u>c/</u>	<u>c/</u>
Chandler's Palos Verdes Sand and Gravel Corporation	306.20	0.00	0.00	306.20
Coast Forest Products	0.00	0.00	<u>d/</u>	<u>d/</u>
Columbia Broadcasting System, Incorporated	0.00	0.00	0.00	0.00
Curtis, Owen W.	0.05	0.00	0.00	0.05
Delaney, Golda, Estate of	0.00	0.00	0.00	0.00
Desser Enterprises	0.17	0.00	0.00	0.17
Dominguez Water Corporation	8,577.20	20,564.70 ^{e/}	0.00	29,141.90
El Segundo, City of	0.00	14,993.10	0.00	14,993.10
Engelsma, Jake ^{a/}	0.00	0.00	<u>d/</u>	<u>d/</u>
Etchemendy, Caroline, Estate of	0.00	0.00	<u>c/</u>	<u>c/</u>
Flesh, Emery and Andor Pasternak, et al.	0.00	0.00	<u>d/</u>	<u>d/</u>
Fletcher Oil and Refining Company	89.96	0.00	87.32	177.28
Fujimoto, Samuel R. and Raymond S.	6.13	0.00	<u>d/</u>	<u>d/</u>
Gillingham, Florence R., et al.	0.00	0.00	<u>d/</u>	<u>d/</u>
Gonzales, Felipe	0.00	0.00	<u>c/</u>	<u>c/</u>
Grant, John, Estate of	0.00	0.00	<u>c/</u>	<u>c/</u>
Harris Tube, Incorporated	0.00	0.00	<u>c/</u>	<u>c/</u>
Hawthorne, City of	2,055.04	3,509.70	0.00	5,564.74
Hillside Memorial Park	58.96	0.00	0.00	58.96
Hollywood Turt Club	196.93	0.00	149.19	346.12
Industrial Chemical Division, Allied Chemical Corporation	135.12	0.00	723.66	858.78
Inglewood, City of	4,270.07 ^{f/}	7,930.10 ^{g/}	0.00	12,200.17
Inose, Kenichi	12.88	0.00	0.00	12.88
Ishibashi, Aki	31.35	0.00	0.00	31.35
Jenkins, Harry C.	0.00	0.00	<u>c/</u>	<u>c/</u>
Johns-Manville Products Corporation	787.74	0.00	717.92	1,505.66
Joughin Torrance Ranch	0.00	0.00	<u>d/</u>	<u>d/</u>
Jungquist, Fred A.	0.00	0.00	<u>c/</u>	<u>c/</u>
Lermens, Alfred	0.00	0.00	0.00	0.00
Leuzinger, Emma L.	0.00	0.00	<u>c/</u>	<u>c/</u>
Long Beach, City of	0.00	32,152.29 ^{g/}	0.00	32,152.29
Lopes, Frank	0.00	0.00	0.00	0.00
Los Angeles, City of	1,503.31	53,398.00 ^{b/}	0.00	54,901.31
Los Angeles County-Alondra Park	527.85	0.00	71.30	599.15
Los Angeles County Sanitation District No. 2	72.86	0.00	269.82	342.68
Los Angeles County Waterworks District No. 13	568.48	1,861.40	0.00	2,429.88
Los Angeles County Waterworks District No. 22	592.33	887.60	0.00	1,479.93
Los Angeles County-Western Avenue Golf Course	183.69	0.00	31.71	215.40
Loyola University of Los Angeles	0.00	0.00	140.77	140.77
Manhattan Beach, City of	32.82	5,382.60	55.54	5,470.96
Mayflower Nurseries	4.89	0.00	<u>d/</u>	<u>d/</u>
McDonnell Douglas Corporation	0.05	0.00	<u>d/</u>	<u>d/</u>
Mobil Oil Corporation	4,050.95	0.00	3,118.30	7,169.25

GROSS WATER SUPPLY
In acre-feet
(continued)

Party	Total	Purchased supply		Total supply
	ground water	Imported ^{a/}	Within basin ^{b/}	
	extractions			
Moran, Ronald E.	0.00	0.00	0.00	0.00
Mori, Roy H. and Kenji	0.00	0.00	0.00	0.00
Murdock, George R.	0.00	0.00	c/	0.00
Norair, A Division of Northrop Corporation	0.00	0.00	d/	d/
Otani, Chisato	61.68	0.00	0.00	61.68
Pacific Crest Cemetery Company	33.09	0.00	0.00	33.09
Palos Verdes Begonia Farm	2.34	0.00	0.00	2.34
Palos Verdes Water Company	0.00	11,699.20	0.00	11,699.20
Park Water Company	299.14	0.00	0.00	299.14
Phillips Petroleum Company	0.00	0.00	30.74	30.74
Rehor, Josephine P.	0.00	0.00	c/	c/
Rockwell, Michael L.	0.00	0.00	0.00	0.00
Roman Catholic Archbishop of Los Angeles	116.49	0.00	0.00	116.49
Sante Fe Land Improvement Company	0.00	0.00	d/	d/
Sheets, Esther M.	1.06	0.00	0.00	1.06
Shell Oil Company	4,804.85	0.00	3,400.69	8,420.04
Shinoda Brothers, Incorporated	17.54	0.00	0.00	17.54
Southern California Edison Company	6.84	0.00	3.66	10.50
Southern California Water Company	6,547.05	21,477.87 ^{j/}	290.78	28,315.70
Spanish American Institute	14.96	0.00	0.00	14.96
Sparkletts Drinking Water Corporation	69.34	0.00	0.00	69.34
Standard Oil Company of California	1,640.19	0.00	8,632.00	10,272.19
Stauffer Chemical Company	291.57	0.00	416.80	708.37
Superior Oil Company	0.00	0.00	0.00	0.00
Texaco, Incorporated	4,431.30	0.00	2,312.51	6,743.81
Torrance, City of	3,868.66	19,554.85	0.00	23,423.51
Union Nursery, Incorporated	10.39	0.00	0.00	10.39
Union Oil Company of California	2,270.69	0.00	5,301.23	7,571.92
United States Steel Corporation	1,212.03	0.00	153.25	1,365.28
Watson Land Company	17.10	0.00	38.67	55.77
Wiseburn School District	0.00	0.00	59.49	59.49
Ziegler, Maxwell T.	25.09	0.00	0.00	25.09

a/ Imports from Metropolitan Water District or member agency unless otherwise noted.

b/ Purchased from municipal, mutual, or public utility water agency.

c/ Domestic use with consumption less than one acre-foot purchased from public utility.

d/ Information not available.

e/ Includes 3,373.3 acre-feet of Central Basin ground water.

f/ Of this amount 26.7% is exported to Central Basin.

g/ Includes Central Basin ground water.

h/ Imported from Owens River-Mono Basin.

j/ Includes 978.7 acre-feet of Central Basin ground water.





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